

CHAPTER 2: ALTERNATIVES



2.0 ALTERNATIVES

This chapter outlines alternatives that describe different approaches to the management of Bureau of Land Management (BLM) public lands and resources in the Ring of Fire planning area. The Federal Land Policy and Management Act (FLPMA) (1976) and BLM's planning regulations outline a specific set of required components of a Resource Management Plan (RMP). These required components determine the structure of the RMP alternatives presented in this chapter of the Proposed RMP (PRMP) /Final Environmental Impact Statement (FEIS). Each alternative represents a complete and reasonable set of objectives, actions, and allocations that would guide future management of public lands and resources in the planning area. This chapter also includes discussions of alternatives considered but eliminated from detailed analysis (Section 2.2), and programs with management common to all alternatives (Section 2.4).

Four alternatives are presented in this chapter. One alternative describes the continuation of current, existing management and serves as the No Action Alternative (Alternative A). The Council on Environmental Quality (CEQ) regulations require a no-action/"current management" alternative to be considered in every document subject to requirements with the National Environmental Policy Act (NEPA). Three action alternatives (Alternatives B, C, and D) describe proposed changes to current management, as well as what aspects of current management would be carried forward. The action alternatives provide a range of choices for meeting BLM planning and program management requirements and resolving the planning issues identified through scoping (refer to Chapter 1 for a discussion of the scoping process). Alternatives were developed using an interdisciplinary team process that included BLM staff specialists and cooperating agencies. Each alternative analyzed in the PRMP/FEIS allows for some level of support of all resources and programs present in the Ring of Fire planning area and is designed to guide future management and resolve land management issues identified during the early stages of the planning process. Implementation of future management actions under any alternative would be subject to the limits of available funding and staff.

The management actions identified under each alternative would apply to lands within the Ring of Fire planning area currently under BLM management, which include unselected public lands, State-selected lands, and Native-selected lands outside the national park, national refuge, and national forest systems (see p. 2-10 for a discussion of selected lands). Special management designations on State- or Native-selected lands do not carry forward following conveyance of the lands. However, several areas are exceptions to the general applicability of the alternatives described in this chapter: the Campbell Tract Facility, Fort Richardson Army Post (FRAP), Elmendorf Air Force Base (EAFB), and the federal subsurface estate under components of the National Wildlife Refuge (NWR) System and the National Forest System within the Ring of Fire planning area. The management of these areas is as follows:

- Management of the Campbell Tract Facility will be the same under all alternatives. The site was withdrawn for administrative purposes in 1982 (Public Land Order [PLO] 6127). This withdrawal has been renewed (PLO 7471) and will expire in 2017. Management of this administrative site would continue to be guided by *A Management Plan for Public Use and Resource Management on the Bureau of Land Management Campbell Tract Facility* (BLM 1988b). As stated in that document, "the primary objective for management of the Campbell Tract Facility...is to continue its use for BLM administrative operations. Within administrative constraints, the management of public use and natural resources

on the facility will emphasize semi-primitive, non-motorized recreation opportunities and environmental education in a natural setting” (refer to Section 3.4.1.2 for further information on Campbell Tract recreation management). Future amendments to the facility’s management plan, if needed, would maintain the emphasis on the administrative purposes of the withdrawal, would be completed at the activity-plan level, would be subject to the NEPA process, and would afford opportunity for public participation. Any such amendment would be undertaken subsequent to completion of this PRMP/FEIS in order to respond to any new opportunities, changes in the Campbell Tract’s environment or use, and/or issues arising from changes in management of adjoining lands.

What is the Campbell Tract?

The 730-acre Campbell Tract Facility, including the surrounding lands, are managed as a BLM administrative site. Within administrative constraints, the management of public use on the Campbell Tract emphasizes semi-primitive, non-motorized recreation opportunities, and environmental education in a natural setting. Management of Campbell Tract will not be affected by decisions made in this PRMP/FEIS.

- Management of the military withdrawals for FRAP and EAFB will be the same under all alternatives. These lands were withdrawn for military purposes by Executive Order (EO) 8102 and other associated withdrawal orders. The EO withdrew the lands from “settlement, location, sale, entry, and all forms of appropriation.” BLM is the Secretary of the Interior’s (Secretary) authorized delegate and retains jurisdiction of mineral and vegetative resources on the installations, although BLM’s authority is limited. It may authorize non-military activities that are consistent with the purposes of the withdrawal (i.e., are consistent with the military’s mission), but as specified in PLO 2676, BLM may grant leases, licenses, easements, and rights-of-way (ROWs), *only* with the approval of the military. FRAP and EAFB are managed by the respective military branches using Integrated Natural Resource Management Plans. The primary purpose for these plans is to support the military training mission by protecting and enhancing the lands upon which that mission is dependent. BLM was a participant in the development of these plans, which also address recreational opportunities associated with the natural resources found within these installations. Under all alternatives, therefore, BLM will continue to permit non-military activities consistent with the withdrawal orders and the concurrence of the military.
- Management of the federal subsurface estate, within BLM’s responsibility, in components of the NWR System and the National Forest System will be the same under all alternatives. BLM is responsible for oil and gas leasing within refuges and forests (the Alaska National Interest Lands Conservation Act [ANILCA] (1980) Section 206 withdrew new and expanded components of the National Park System from the mining laws). Provisions of ANILCA (Sections 304(b) and 1008) require that no leasing take place in refuges that the United States (U.S.) Fish and Wildlife Service (USFWS) determines is incompatible with the purposes of the refuges. The U.S. Forest Service (USFS) is required to analyze oil and gas leasing during the course of planning and any leasing of oil and gas would be conducted by BLM only following authorization of such leasing by the USFS’s Regional Forester (36 Code of Federal Regulations [CFR] 219) and 36 CFR 228). Neither the USFWS nor the USFS have determined that lands they manage in the

Ring of Fire planning area are compatible with oil and gas leasing (USFWS 1985a; USFWS 1985b; USFWS 1987a; USFWS 1988; USFWS 1995; USFS 2002a). Under all alternatives, BLM will only undertake leasing in refuge and forest lands if the surface management agency determines that oil and gas leasing is appropriate; in such cases, BLM will work in cooperation with the surface management agency.

A set of stipulations and required operating procedures (ROPs) are integral to the management decisions for the action Alternatives B through D (see Appendix D). Current management (Alternative A) uses standard lease terms for drainage activities. Stipulations and ROPs are developed through the RMP process and are based on knowledge of the resources in the planning area and current industry practices. The stipulations described in Appendix D are specific to oil and gas activities, and constitute significant restrictions on the conduct of operations under a lease. All oil and gas activity permits subsequently issued to a leasee will comply with the lease stipulations appropriate to the activity under review. ROPs are requirements, procedures, management practices, or design features that would be applied as applicable to permitted activities on BLM-managed lands in the planning area. ROPs have been developed to ensure that objectives identified within the Alaska Statewide Land Health Standards (BLM 2004u) are met in carrying out permitted activities and management practices.

2.1 General Description of Alternatives

2.1.1 Alternative A: No Action (Current Management)

Alternative A represents the continuation of current management practices, also called the No Action Alternative. This alternative would include continued management under guidance of the existing Southcentral Management Framework Plan (MFP) for those lands covered by that plan, and other management decision documents. Direction contained in existing laws, regulations, and policy would also continue to be implemented, sometimes overriding provisions in the Southcentral MFP. The current levels, methods, and mix of multiple use management of BLM land in the planning area would continue, and resource values would receive attention at present levels. No lands would be open to oil and gas leasing, including leasing for coalbed natural gas (CBNG), and large tracts would remain closed to the operation of the mineral laws due to retention of the Alaska Native Claims Settlement Act (ANCSA) 17(d)(1) withdrawals. No special management areas, such as Areas of Critical Environmental Concern (ACEC), or Special Recreation Management Areas (SRMA) would be designated or recommended in this RMP for BLM-managed lands within the planning area, and lands would remain unclassified for off-highway vehicles (OHVs) and visual resources. In general, most activities would be analyzed on a case-by-case basis and few uses would be limited or excluded as long as their actions were consistent with State and federal laws.

2.1.2 Alternative B: Resource Development

Alternative B highlights actions and management that would facilitate resource development. Nearly all unselected lands, and those selected lands whose selection would be otherwise relinquished or rejected, would be open to oil and gas leasing and development. All ANCSA 17(d)(1) withdrawals would be revoked, allowing increased potential for mineral exploration and development. The BLM-managed lands within the planning area would be designated as “open” to OHV use. As with Alternative A, no special management areas (SMAs) would be designated, and visual resources would be managed as Visual Resource Management (VRM) Class IV (see

p. 2-31 for a description of VRM Classes). Resources would also be protected through ROPs and/or stipulations as described in Appendix D.

2.1.3 Alternative C: Resource Conservation

Alternative C emphasizes actions and management that would protect and enhance resource values. Oil and gas leasing and mineral exploration and development would be more constrained than in Alternatives B or D, and on a substantial portion of the BLM-managed lands within the Ring of Fire planning area, leasing and mineral location would be excluded to protect important resources. One ACEC and two SRMAs would be established if these lands remain in long-term BLM ownership. Implementation plans would be developed in future planning efforts for these areas that would outline specific measures to protect or enhance values within these areas. All BLM-managed lands within the planning area would be designated as “limited” to OHV use, allowing limitations to protect habitat, soil and vegetation, and recreation experiences. ANCSA 17(d)(1) withdrawals would be maintained as an interim measure while BLM pursues withdrawal or other appropriate land management actions in order to protect or maintain resource values. Fourteen river segments were determined eligible, but not suitable as Wild and Scenic Rivers (WSR). The ACEC and two other smaller parcels would be managed as VRM Class II, and most of the remainder of the BLM-managed lands within the planning area would be managed as VRM Class III. As with Alternative B, resources would also be protected through stipulations and/or ROPs.

2.1.4 Alternative D: Proposed Action

Alternative D provides a balance of protection, use, and enhancement of resources. The majority of unselected lands and those selected lands, whose selections were relinquished or rejected, would be open to oil and gas leasing and development and mineral location, though certain unique or sensitive areas would remain closed. One ACEC and two SRMAs would be established if these lands remain in long-term BLM ownership. Implementation plans would be developed in future planning efforts for these areas that would outline specific measures to protect or enhance values within these areas. While two small parcels and the ACEC would be managed for VRM Class II, other lands would be managed for VRM Class IV. All BLM-managed lands within the Ring of Fire planning area would be designated as “limited” to OHV use, allowing limitations to be placed on OHV use to protect habitat, soil and vegetation resources, and/or recreation experiences. All ANCSA Section 17(d)(1) withdrawals would be revoked, allowing increased potential for mineral exploration and development. As with Alternatives B and C, resources would be protected through the NEPA process and the application of the appropriate stipulations and/or ROPs.

2.1.5 Discussion of the Alternatives

The following discussion of alternatives is presented in four sections.

- Section 2.2 presents the alternatives considered but eliminated from detailed analysis.
- Sections 2.3 and 2.4 present the elements of the four alternatives carried forward for detailed analysis in the PRMP/FEIS.
 - Alternative descriptions related to key resource areas are presented in Section 2.3, where proposed management measures vary by alternative. These are resources

and resource uses that 1) have been identified in the BLM Land Use Planning handbook as requiring management actions during preparation of an RMP and/or 2) have been identified during scoping as an issue to address in the PRMP/FEIS process. For each key resource or resource use identified, program objectives, management common to all alternatives, and actions that vary by alternative are presented.

- Section 2.4 presents resources or resource uses with management actions common to all alternatives, where there is no variability among alternatives.
- Section 2.5 presents a comparison of the four alternatives in a summary table format. Management actions that are common to all alternatives (Section 2.4) are not presented in this table.

2.2 Alternatives Considered But Eliminated From Detailed Analysis

A number of specific alternatives were suggested for analysis in the Ring of Fire PRMP/FEIS process, but were not carried forward into the final document. These suggestions were raised in comments submitted during scoping and review of the Draft Ring of Fire RMP/EIS.

- **Consider designating wilderness areas**

As discussed in Sections 1.1 and 1.3.2, wilderness designation is outside the scope of this plan, and was not considered as part of the development of alternatives.

- **Designate additional river segments as eligible for WSR status**

BLM inventoried 50 potential rivers and glaciers within the Ring of Fire planning area to determine their potential for Wild and Scenic River designation. Of the 50 inventoried, nine are glaciers that are not free-flowing rivers, as required by the Act, 16 U.S.C. Section 1286, and two are river segments not located on land managed by BLM. A total of 39 river segments were evaluated to determine if they met the eligibility standards. Of the 39 river segments, 14 were determined to be free-flowing and possess at least one outstandingly remarkable value, thereby meeting the standard as “eligible.” The analysis of these rivers is found in Section 3.4.1.3.

- **Designate BLM-managed lands as ACECs**

BLM analyzed 14 areas nominated as ACECs, Research Natural Areas (RNAs), or Outstanding Natural Areas (ONAs). RNAs and ONAs are types of ACECs, and were analyzed as such. To be considered for designation as an ACEC, an area must have a resource value that is both relevant and important. The results of the analysis, as well as a summary of what constitutes relevance and importance, are detailed on the following decision matrix. The Southern Neacola Block was found to have resource values that were both relevant and important, and was carried forward for detailed analysis. The remaining 13 areas were not carried forward. As a result of the analysis, the Haines Area and the Knik River Valley were determined to have resource values that require additional analysis in the context of designation as SRMAs.

The following decision matrix identifies the different areas nominated for ACEC status (including RNAs and ONAs), and summarizes the factors considered and the conclusions reached to either carry forward or dismiss nominations.

Nominated ACEC Area	Relevance ¹				Importance ²				
	1	2	3	4	1	2	3	4	5
Northern Neacola Block									
Southern Neacola Block	X				X	X			
Port Heiden Units		X							
Port Moller Units		X							
Haines Area (BLM lands)	X	X							
SE temperate rainforest		X							
Palmer Hay Flats		X							
Knik River Valley	X	X							
Iniskin River		X							
Ursus Cove		X							
Kirschner Lake Complex		X							
McArthur River									
Harriet Creek		X							
Chilligan River									
All old growth forests (under 1,500 ft)									

¹ **Relevance Factors (from BLM Manual 1613.1.11.A):**

1. A significant historic, cultural or scenic value (including but not limited to rare or sensitive archeological resources and religious or cultural resources important to Native Americans).
2. A fish and wildlife resource (including but not limited to habitat for endangered, sensitive or threatened species, or habitat essential for maintaining species diversity).
3. A natural process or system (including but not limited to endangered, sensitive or threatened plant species; rare, endemic or relic plants or plant communities which are terrestrial, aquatic or riparian; or rare geological features).
4. Natural hazards (including but not limited to areas of avalanche, dangerous flooding, landslides, unstable soils, seismic activity, or dangerous cliffs). A hazard caused by human action may meet the relevance criteria if it is determined through the resource management planning process that it has become part of a natural process.

² **Meets one or more of the following Importance Factors (from BLM Manual 1613.1.11.B):**

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource.
2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change.
3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA.
4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare.
5. Poses a significant threat to human life and safety or to property.

2.3 Alternative Descriptions Related to Key Resource Program Areas

This section provides detailed descriptions of alternative approaches to key components of future management of the BLM-managed lands within the Ring of Fire planning area. These components are resources or resource uses that BLM has authority over, and include: lands and realty, fluid leasables (oil and gas, CBNG, and geothermal), solid leasables (coal and other less commonly available mineral resources), locatables (minerals including gold, silver, lead, zinc, and others) and salables (principally sand and gravel), OHVs, recreation, visual resources, wildlife, and WSRs. They were listed as key resources that have been identified in the BLM planning handbook as requiring management actions during preparation of an RMP, and/or have been identified during scoping as an issue to address in RMP/EIS planning process. Management objectives are presented for each resource program area to summarize the regulatory guidance and context for management actions. Management that is common to all alternatives is then described in the text. The tables following each section illustrate the different management approaches proposed under each of the four alternatives.

2.3.1 Lands and Realty

2.3.1.1 Objectives

Management objectives for lands and realty actions under all alternatives include:

- Support the BLM Alaska policy to survey and convey lands to the State of Alaska, Native corporations, and Native allottees.
- Provide a balance between land use (ROWs, land use permits, leases, and sales) and resource protection that best serves the public at large.
- Provide support to other BLM programs to protect and enhance resources.

2.3.1.2 Management Common to All Alternatives

Land Disposals

Lands withdrawn from the public land laws or segregated by State or Native selection would not be analyzed for disposal, though they may be conveyed to the State or Native corporations. Currently, lands with mining claims of record under Section 314 of the Federal Land Policy and Management Act (FLPMA) (1976) would not be analyzed for disposal, except through conveyance to Native corporations. Refer to Table 2.3-1 for a comparison of the lands and realty management actions proposed under each alternative.

Entitlement and Settlement

BLM will assist in the conveyance of lands pursuant to legislative mandates, including the Alaska Statehood Act (1958), ANCSA (1971), and the Native Allotment Act (1906).

How does BLM manage small, scattered tracts of land?

Small tracts of land present management challenges and are complicated by ANCSA and State selections. Within the Ring of Fire planning area, roughly 2/3 of BLM managed lands are subject to State and Native corporation selections. BLM will satisfy these entitlements. In the interim, BLM manages the lands through the NEPA process, application of stipulations and ROPs, and obtaining concurrence or non-objection for proposals on management from the selecting entity. When lands are transferred out of federal ownership, BLM gives up its management responsibility. After the conveyance process is complete, BLM will initiate the specific steps to (with appropriate NEPA consideration) identify to exchange, dispose of and acquire lands to consolidate ownership patterns and facilitate cost-effective management.

Sales

BLM lands meeting one or more of the following criteria could be disposed of through FLPMA Section 203 (43 CFR 2710):

- A tract that was acquired for a specific purpose and is no longer required for that or any other federal purpose.
- A tract whose disposal would serve important public objectives, including, but not limited to, expansion of communities and economic development that cannot be achieved prudently or feasibly on other than public lands and that outweigh other public objectives and values, including, but not limited to, recreation and scenic values, which would be maintained in federal ownership.
- A tract that, because of its location or other characteristics, is difficult and uneconomic to manage as part of the public lands and is not suitable for management by another federal department or agency.

Sales of specific parcels are analyzed in this PRMP/FEIS. Future sales of additional sites would be analyzed in subsequent planning efforts.

Recreation and Public Purposes (R&PP) Act

Lands identified for disposal under this authority that are selected by either the State or Native corporations would have to be fully adjudicated before BLM would entertain a sale. In order to be analyzed for disposal under the R&PP Act, the following conditions must exist:

- Lands must be readily accessible to a qualified applicant.
- The qualified applicant must have a defined purpose for the land and secure funding to develop it.
- R&PP sale would not be implemented on lands withdrawn for another agency without that agency's approval.
- Lands within a proposed SRMA or ACEC would not be considered available under R&PP.

In most instances, BLM would first lease lands under this act and only convey the lands after the project is constructed in compliance with an approved development and management plan.

An important exception to this would be tracts proposed as sanitary landfills, which would always be sold; they would not be leased. Application for tracts to be used as a sanitary landfill would only be conveyed with a clause that would prohibit reversion to the federal government, and existing leases would be converted to patents if the lands are used for sanitary landfills.

Act of August 1, 1956 Public Land Order 1613 (Sales)

BLM would continue to convey PLO 1613 lots, typically found along highway ROWs, to qualified applicants.

Airport and Airway Improvement Act of September 3, 1982

BLM would continue to process airport conveyances as requested by the Federal Aviation Administration. Each conveyance would contain appropriate covenants and reservation requested by the Federal Aviation Administration. As a condition to each conveyance, the property interest conveyed would revert to the federal government in the event the lands are not developed for airport or airway purposes or are used in a manner inconsistent with the terms of the conveyance.

Exchanges

BLM would strive to process mutually beneficial public interest land exchanges. Exchanges are authorized in Alaska by FLPMA, ANCSA, and ANILCA. When considering public interest, full consideration shall be given to efficient management of public lands and to secure important objectives including: protection of fish and wildlife, cultural resources, and aesthetic values; enhancement of recreational opportunities; consolidation of mineral and timber holdings for more logical and efficient management; expansion of communities; promotion of multiple use values, and fulfillment of public needs. Exchanges would not be actively sought out until State and Native entitlements are fulfilled.

Acquisitions

BLM would acquire private lands through purchase or exchange with willing owners within areas identified for long-term federal management and retention, and to further the programs of the Secretary, including access, and to meet specific plan objectives. Acquisitions and/or exchanges to improve the manageability by consolidating BLM's holdings would be consistent with our land management objectives. When feasible, BLM would acquire less than fee title to property if management goals could be achieved.

Land Use Authorizations

State and Native selections affect land use authorizations (refer to Figures 1.2-2 through 1.2-4, in Appendix A, for locations of State- and Native-selected lands):

- **Native-selected**—Prior to the issuance of a use authorization, the views of the Native corporation shall be obtained and considered. Monies received for most use authorizations are placed in an escrow account and transferred to the corporation upon transfer of title.

- **State-selected**—In accordance with 906(k) of ANILCA, BLM must receive a letter of concurrence prior to issuance of any use authorization. BLM may then incorporate comments from those letters of concurrence in the terms and conditions of the use authorization if in compliance with federal laws and regulations. Monies received for most use authorizations are placed in an escrow account and transferred to the State upon transfer of title. If the State objects to the authorization, BLM would not issue the use authorization. If the proposal is on land that has been top-filed by the State, pursuant to 906(e) of ANILCA, a letter of concurrence is not required.

Under all the action alternatives (Table 2.3-1), all parties receiving BLM authorizations would be required to comply with numerous protective measures listed in the ROPs, stipulations, and Standard Lease Terms (see Appendix D).

Selected vs. Unselected Lands

Selected lands refer to those land selections made in Alaska pursuant to the Alaska Statehood Act (1958) and ANCSA (1971). The selection serves to withdraw the lands from all forms of appropriation under the public land laws. Selected lands continue to be managed by BLM, but depending on the selecting entity, BLM is required to obtain concurrence (State-selection) or seek and consider comments (Native-selection) on any authorization to use the lands issued by BLM. *Unselected lands* are managed by BLM without these constraints.

FLPMA Leases

All FLPMA leases would be at fair market value. Cabins or permanent structures used for private recreation cannot be authorized under FLPMA. Proposals for leases for commercial use cabins (such as guiding or trapping) would be subject to the following criteria:

- Proximity to other private property or existing authorized structures.
- Proximity to existing transportation routes or systems.
- Documentation of customary lifestyle and need.

FLPMA Permits

FLPMA permits are short-term revocable authorizations to use public lands for a specific purpose. Per 43 CFR 2920.2-2, they may be granted for a land use if BLM determines that the use conforms with agency plans, policies, and programs; local regulations and other requirements, and will not cause appreciable damage or disturbance to the public lands, their resources, or improvements.

Specific exclusion areas to FLPMA permits are described in the narrative below. In general:

- Cabin or permanent structure permits would not be issued for private recreation purposes.
- Trapping shelters would be authorized with short-term (three-year maximum) permits renewable at the discretion of BLM and tied to the applicant's customary lifestyle and need.

- Shelters, tent platforms, and other temporary facilities and equipment used for hunting and fishing are allowed on BLM lands under Section 1316 of ANILCA, as follows:

On all public lands where the taking of fish and wildlife is permitted in accordance with the provisions of this act or other applicable State and federal law, the Secretary shall permit, subject to reasonable regulation to insure compatibility, the continuance of existing uses, and the future establishment and use of temporary campsites, tent platforms, shelters, and other temporary facilities and equipment directly and necessarily related to such activities. Such facilities and equipment shall be constructed, used, and maintained in a manner consistent with the protection of the area in which they are located. All new facilities shall be constructed of materials that blend with and are compatible with the immediately surrounding landscape. Upon termination of such activities and uses (but not upon regular or seasonal cessation), such structures or facilities shall, upon written request, be removed from the area by the permittee.

The Senate Committee on Energy and Natural Resources Report states in Section 1316 of H.R. 39 (later passed as ANILCA) that equipment and facilities, which would be utilized in carrying out permitted activities, such as guided hunting, sport hunting, and commercial fishing, shall be permitted.

- Guide shelters would only be authorized in conjunction with Special Recreation Permits (SRPs) issued under FLPMA authority. Criteria for consideration of issuance of such permits are the same as described above for cabin leases.

FLPMA Easements

FLPMA easements are an authorization for a non-possessory, non-exclusive interest in lands that specifies the rights of the holder and the obligation of BLM to use and manage the land in a manner consistent with the terms of the easement. Each proposal for an easement would be scrutinized on a case-by-case basis and, per 43 CFR 2920.7, would contain terms and conditions protecting the environment and public health and safety.

Rights-of-Way

A ROW is public land that is authorized to be used or occupied pursuant to a ROW grant. ROW grants authorize the holder to construct, operate, and maintain a project for a specified use for a set amount of time. ROWs would normally be issued at fair market value. The construction of new roads and ROWs would recognize valid and existing rights.

ROWs for oil or gas pipelines and their related facilities are issued under the authority of Section 28 of the Mineral Leasing Act (1920). Per 43 CFR 2880, BLM shall place stipulations on these ROWs requiring:

- Restoration, revegetation, and curtailment of erosion.
- Compliance with air and water quality standards.
- Control or prevention of damage to the environment, to public or private property, and hazards to public health and safety.
- Protection of the subsistence interests of those living along the ROW.

Title V of FLPMA authorizes the issuance of ROWs for other uses, such as roads, water pipelines, electric lines, and communication sites. Per 43 CFR 2800 and ANILCA, BLM may grant such ROWs provided that:

- The natural resources associated with the public lands adjacent to private or other lands administered by a government agency are protected.
- Unnecessary and undue environmental damage to the lands and resources are prevented.
- The utilization of ROWs is common with respect to engineering and technological compatibility, national security, and land use plans is promoted.
- Coordination, to the fullest extent possible, takes place with State, local governments, interested individuals, and appropriate non-governmental entities.

Recreation and Public Purposes Leases

A lease allows the lessee to conduct authorized activities on BLM lands, at fair market value; however the land would remain in federal ownership. Should the land be patented (authorized for sale), the land would be removed from federal ownership to the lessee. R&PP leases would not be issued for sanitary landfill purposes. In the case of a patent for an existing lease of a sanitary landfill, the land could be patented without a clause that prevents the land from returning to federal ownership (reverter clause).

Unauthorized Use

Unauthorized cabins may become the property of the U.S. government and be managed as administrative sites, emergency shelters, or as public use cabins. Possible management actions on unauthorized cabins include:

- Removal of the structure.
- Relinquishment to the U.S. government for management purposes.
- Authorization by lease or permit for legitimate uses if consistent with identified area objectives.

The criteria for management actions on unauthorized cabins under lease and permits would be the same as bullets 2 and 3 above. Criteria for prioritizing and dealing with unauthorized cases are as follows:

- Situations involving new unauthorized construction, public safety, or public complaints.
- Areas identified for long-term federal management.
- Selected lands on which resources are being removed without authorization or where resource damage is occurring.
- Other selected lands.

Conservations System Units

Conservation system units (CSUs), as defined by ANILCA, include any unit in Alaska of the NPS, National Wild and Scenic Rivers System, National Trails System, National Wilderness Preservation, or a National Forest Monument, including existing units, units established, designated or expanded by or under the provisions of this act, additions to such units and any such unit established, designated, or expanded hereafter (ANILCA Section 102(4)).

17(b) Easements

BLM would continue to manage ANCSA Section 17(b) easements that have been reserved in patents or interim conveyances to ANCSA corporations. 17(b) easement management will be transferred to the National Park Service (NPS), USFWS, or the USFS for those easements that access the CSU or are wholly within the boundaries of the CSU. BLM will continue to mark and verify 17(b) easement locations as staffing and budgets allow. BLM reserves easements to ensure access to federal, State, and municipal corporation lands as ANCSA conveyances take place. BLM would continue to identify, sign, map, monitor use, and realign 17(b) easements, with priority based on:

- Easements accessing lands that are permanently managed by BLM or are important to BLM programs.
- Easements receiving high use.
- Easements required to implement an activity or implementation plan.
- Easements where land owners support the activity allowed by the easement.
- Easements where signing or education would mitigate environmental damage to the easement or BLM-managed lands.

These criteria would be used to prioritize discretionary actions on 17(b) easements, such as education/interpretation and maintenance. Realignment of 17(b) easements would be considered with the cooperation of the landowner on lands already conveyed.

Conservation Easements

BLM would continue to manage conservation easements for the specific purpose for which they were acquired.

Withdrawal Review

Table 3.3-1 (Chapter 3) displays some of the withdrawals of BLM lands occurring within the planning area and their segregative effect. BLM would maintain the withdrawals until, and unless, the agency for which the land was withdrawn requests relinquishment of the withdrawals.

ANCSA 17(d)(1) Withdrawals

ANCSA 17(d)(1) withdrawals are PLOs implementing this provision of ANCSA. These withdrawals were temporary in nature, allowing the selection and classification of lands. These selections have been completed and BLM uses the RMP document to complete the classification. The revocation of ANCSA 17(d)(1) withdrawals will remove the restriction created in ANCSA, which closed the lands to all forms of appropriation under the public land laws, including mining (except locations for metalliferous minerals) and the mineral leasing laws. The review of these withdrawals within the planning area is addressed in this PRMP/FEIS.

Table 2.3-1. Comparison of Alternatives – Lands and Realty*

Management Actions	Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
Sales	No lands are currently identified for sale.	<p>Three parcels located in Cape Pole on the west side of Prince of Wales Island totaling 5.03 acres:</p> <ul style="list-style-type: none"> • U.S. Survey 2615, Lot 2. • U.S. Survey 2616, Lot 12. • U.S. Survey 2616, Lot 14. <p>One parcel located in Ketchikan comprising the Southern Southeast Aquaculture Association totaling 3.10 acres:</p> <ul style="list-style-type: none"> • U.S. Survey 3835, Lot 106. <p>Four parcels located in Tenakee Hot Springs:</p> <ul style="list-style-type: none"> • U.S. Survey 1409, MSR 1, MSR 2, MSR 3, and MSR 4, located within C.R.M., T. 47 S., R. 63 E., sec. 21. 	No lands would be identified for sale.	Same as Alternative B.
Acquisitions	Consider acquisition of lands and easements from willing landowners on a case-by-case basis to meet specific plan objectives.		Same as Alternatives A and B. In addition, emphasis areas for acquisition from willing landowners would be considered in the Neacola Mountains ACEC (Figures 2.3-1 and 2.3-3), Haines Block SRMA (Figures 2.3-2 and 2.3-4), Knik River SRMA (Figures 2.3-1 and 2.3-5), and the Iditarod NHT to further SMA and CSU objectives.	

Table 2.3-1 (continued). Comparison of Alternatives – Lands and Realty*

Management Actions	Alternative A – Current Management	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
Withdrawals	Retain ANCSA 17(d)(1) withdrawals.	Revoke existing 17(d)(1) withdrawals.	<p>Unselected lands (241,000 acres) not given exception below and any selected lands (387,000 acres) not excepted below whose selection is relinquished or revoked would be open for fluid mineral leasing (Figures 2.3-13 through 2.3-15).</p> <p>Exceptions (unselected):</p> <ul style="list-style-type: none"> • Lake Carlanna Municipal Watershed (1,835 acres) (Figure 2.3-2). • Halibut Cove Forest Study Area (120 acres) (Figure 2.3-1). • Neacola Mountains ACEC (229,000 acres) (Figures 2.3-1 and 2.3-3). <p>Exceptions (selected):</p> <ul style="list-style-type: none"> • Haines Block SRMA (273,000 acres) (Figures 2.3-2 and 2.3-4). • Knik River SRMA (79,612 acres) (Figures 2.3-1 and 2.3-5). • Ursus Cove (6,742 acres) (Figure 2.3-7). 	Same as Alternative B.

Table 2.3-1 (continued). Comparison of Alternatives – Lands and Realty *

Management Actions	Alternative A – Current Management	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
Right-of-Way	There would be no avoidance or exclusion areas for ROWs identified on BLM-managed lands within the planning area.		The Mountain Goat Monitoring and Control Area within the Haines Block SRMA (approximately 113,000 acres) (Figures 2.3-2 and 2.3-4) and the Neacola Mountains ACEC (229,000 acres) (Figures 2.3-1 and 2.3-3) would be identified as avoidance areas for ROWs.	The Mountain Goat Monitoring and Control Area within the Haines Block SRMA (approximately 113,000 acres) is identified as an avoidance area for ROWs (Figures 2.3-2 and 2.3-4).

Notes: * This table highlights the different management approaches under each of the alternatives. Other types of withdrawals, disposals, and ROW issues are dealt with in the text of Chapter 2. Refer to Figures 2.3-1 through 2.3-5 to identify the location of the SMAs of land mentioned in this table.

ACEC: Area of Critical Environmental Concern

ANCSA: Alaska Native Claims Settlement Act

BLM: Bureau of Land Management

CSU: conservation system unit SRMA:

NHT: National Historic Trail

SMA: Special Management Area

SRMA: Special Recreation Management Area

U.S.: United States

2.3.2 Fluid Leasable Minerals

2.3.2.1 Objective

The public lands and federal mineral estate would be made available for orderly and efficient exploration, development, and production of fluid leasable mineral resources (includes oil, natural gas, tar sands, CBNG, and geothermal steam), unless withdrawal or other administrative action is justified in the national interest. All fluid leasable minerals actions will comply with goals, objectives, and resource restrictions (mitigations) to protect other resource values on BLM-managed lands within the Ring of Fire planning area. Refer to Table 2.3-2 for a comparison of the fluid leasable mineral management actions proposed under each alternative.

2.3.2.2 Management Common to All Alternatives

Leasable Minerals

Lands currently under selection by the State and Native corporations are segregated from mineral leasing to avoid potential encumbrances prior to conveyance. Therefore, decisions made within this RMP/EIS to “open” areas for mineral exploration or development would not go into effect unless lands are retained long-term in federal ownership (i.e., not conveyed to the State or Native corporations).

Leasing would be subject to Standard Lease Terms and, for action alternatives (Alternatives B-D); those applicable restrictions are described in the Oil and Gas Lease Stipulations and ROPs in Appendix D.

All areas open to mineral leasing would be open to geophysical exploration, except those lands containing No Surface Occupancy (NSO) restrictions, which would only be available for geophysical exploration in winter conditions, and would be subject to stipulations and through Casual Use as described under 43 CFR 3150.05(b) during non-winter conditions.

All areas closed to mineral leasing would be closed to geophysical exploration.

No Surface Occupancy

NSO is a limitation of oil and gas leasing. It denotes an area that is open for mineral leasing, but that analysis has found that in order to protect other resources, no well sites, tank batteries, or similar facilities are to occupy the surface of specified lands, unless site-specific analysis shows that resource values can be protected.

Geothermal resources would be available for leasing in areas open to oil and gas leasing. Areas closed to oil and gas leasing are also closed to geothermal leasing.

CBNG development is authorized by the same process as oil and gas.

As described in BLM's *Supplemental Program Guidance for Energy and Mineral Resources* (BLM 1986), and in Appendix C of the Land Use Planning Handbook, federal oil and gas resources (including CBNG) fall into one of four categories (arranged from least to most restrictive):

- **Open Subject to Standard Lease Terms and Conditions**—These are areas where it has been determined through the planning process that the standard terms and conditions of the lease form are sufficient to protect other land uses or resource values.

- **Open Subject to Seasonal or Other Minor Constraints**—These are areas where it has been determined that moderately restrictive lease stipulations may be required to mitigate effects to other land uses or resource values. This category of leases frequently involves timing limitations such as restricting construction activities in important designated big game habitats during certain periods of time, or controlled surface use stipulations such as creating a buffer zone around a key resource.
- **Open Subject to NSO or Other Major Constraints**—These are areas where it has been determined through the planning process that highly restrictive lease stipulations are necessary to protect resources. This category of leases may prohibit the construction of well production and support facilities. These areas can be subject to directional drilling, if technologically and economically feasible.
- **Closed to Leasing**—These are areas where it has been determined that other land uses or resource values cannot be adequately protected, and appropriate protection can be ensured only by closing the land to leasing through either statutory or administrative requirements.

What is drainage of oil and gas?

Drainage of oil or gas occurs whenever an oil or gas well on property adjacent to BLM-managed subsurface produces from a reservoir or reservoirs that extend onto both properties. In such a case, federal resources are being “drained” through a well on other lands, and BLM would lease the federal subsurface or, at a minimum, pursue an agreement for payment of royalties on the government’s share of the oil and gas produced. Where lands in any existing federal lease are being drained of their oil or gas content by wells either on a federal lease issued at a lower royalty rate or on non-federal lands, the lessee shall drill and produce all wells necessary to protect the leased lands from drainage. In lieu of drilling necessary wells, the lessee may pay compensatory royalties.

Table 2.3-2. Comparison of Alternatives – Fluid Leasable Minerals

Management Actions	Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
Areas Open to Fluid Mineral Leasing with Standard Lease Stipulations	No lands are identified as open for fluid mineral leasing except to protect from drainage.	All unselected lands (486,000 acres) and any selected lands (798,000 acres) whose selection is relinquished or rejected would be open for fluid mineral leasing* (refer to Figures 2.3-10 through 2.3-12).	<p>All unselected lands not given exception below (241,000 acres) and any selected lands not excepted below (387,000 acres) whose selection is relinquished or rejected would be open for fluid mineral leasing (Figure 2.3-13 through 2.3-15).</p> <p>Exceptions (unselected):</p> <ul style="list-style-type: none"> • Lake Carlanna Municipal Watershed (1,835 acres) (Figure 2.3-2). • Halibut Cove Forest Study Area (120 acres) (Figure 2.3-1). • Neacola Mountains ACEC (229,000 acres) (Figures 2.3-1 and 2.3-3). <p>Exceptions (selected):</p> <ul style="list-style-type: none"> • Haines Block SRMA (273,000 acres) (Figures 2.3-2 and 2.3-4). • Knik River SRMA (79,612 acres) (Figures 2.3-1 and 2.3-5). • Ursus Cove (6,742 acres) (Figure 2.3-7). 	<p>All unselected lands not excepted below (486,000 acres) and any selected lands (798,000 acres) whose selection is relinquished or rejected would be open for fluid mineral leasing (Figures 2.3-16 and 2.3-17).</p> <p>Exceptions (unselected):</p> <ul style="list-style-type: none"> • Lake Carlanna Municipal Watershed (1,835 acres) (Figure 2.3-2). • Halibut Cove Forest Study Area (120 acres) (Figure 2.3-1).
Notwithstanding the provisions listed within this management action, in cases in which oil and gas is being drained, or may be drained, from federal subsurface by adjacent development activities, BLM may lease such lands (see p. 2-19 for discussion of drainage).				

Table 2.3-2 (continued). Comparison of Alternatives – Fluid Leasable Minerals

Management Actions	Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
Constraints in Lands Opened to Fluid Mineral Leasing	Any leases issued to address drainage would be subject to standard lease terms.	Stipulations and ROPs described in Appendix D apply on all lands open to oil and gas leasing.		
			<p>In addition,</p> <p>To protect onshore habitat of marine mammals, wintering waterfowl, northern sea otters, and brown bear habitat, NSO would be required on BLM-managed lands within a ¼ mile inland from mean high tide in the Cape Lieskof area of the Alaska Peninsula (Figure 2.3-9).</p> <p>To protect habitat for migratory birds within the Palmer Hay Flats (Figure 2.3-5), no oil and gas exploration activity or road building is allowed from March 15 to June 1, and from September 1 to October 31.</p>	

Note: *Existing withdrawals other than 17(d)(1), of approximately 798,000 acres, would remain withdrawn from fluid mineral leasing.

ACEC: Area of Critical Environmental Concern

BLM: Bureau of Land Management

NSO: No Surface Occupancy

ROP: Required Operating Procedure

SRMA: Special Recreation Management Area

2.3.3 Solid Leasable Minerals

2.3.3.1 Objectives

The public lands and federal mineral estate will be made available for orderly and efficient exploration, development, and production of solid leasable mineral resources including coal and oil shale, and non-energy leasable minerals (e.g., potassium, sodium, phosphate), unless withdrawal is justified in the national interest. All solid leasable mineral actions will comply with goals, objectives, and resource restrictions (mitigations) to protect other resource values on BLM-managed lands within the Ring of Fire planning area.

2.3.3.2 Management Common to All Alternatives

Coal

All BLM-administered lands within the Ring of Fire planning area subject to leasing under Part 43 CFR 3400.2 and are open to coal exploration and study. Interest in exploration or leasing of federal coal would be handled on a case-by-case basis. If an application for a coal lease should be received in the future, an appropriate land use and environmental analysis, including the coal screening process, would be conducted to determine whether or not the coal areas are acceptable for further consideration for leasing under 43 CFR 3420.1-4(e). The Ring of Fire PRMP/FEIS would be amended as necessary.

Should coal operations be developed on federal lands, an agreement would likely be developed between the State of Alaska and the Office of Surface Mining defining the regulatory role of the State in these mining operations (30 CFR 745).

Other Solid Leasable Minerals

Solid leasable minerals include chlorides, sulfates, carbonates, borates, silicates or nitrates of potassium or sodium and related products; sulphur on all acquired lands; phosphate, including associated and related minerals; oil shale, and gilsonite (including all vein-type solid hydrocarbons). Commercially valuable deposits of these minerals are unlikely to occur on BLM-managed lands in the planning area. If deposits were discovered, subsequent exploration and development would be analyzed on a case-by-case basis.

2.3.4 Locatable Minerals and Salable Minerals

2.3.4.1 Objectives

BLM will manage the lands within the planning area in a manner that prevents undue and unnecessary degradation from the development of locatable and salable mineral resources. Refer to Table 2.3-3 for a comparison of the locatable and salable mineral management actions proposed under each alternative.

2.3.4.2 Management Common to All Alternatives

Locatable Minerals

Mining of locatable minerals, including existing mineral claims, would be subject to the surface management regulations found in 43 CFR 3809. Surface occupancy under the mining laws (Part 43 CFR 3715) would be limited to uses incident to the mining operation. Bonding would be required in accordance with BLM policy. Specific measures that would be utilized to minimize surface effects and to facilitate rehabilitation and revegetation of mined areas can be found in the ROPs in Appendix D.

All operations must file a Plan of Operations with BLM. The Plan of Operations must be approved prior to commencement of on-the-ground activities. Areas withdrawn from mineral location in which valid existing rights are being exercised require the filing of a Plan of Operations.

What are “ROPs and Stips?”

“ROPs” are management practices or design features that the BLM adopts as operational requirements. They apply to all action alternatives and ALL permitted activities. They are assigned as appropriate to the location and the project. They have been developed to ensure that the objectives identified in BLM’s Alaska Land Health Standards are met in carrying out permitted activities and management practices.

Stipulations (“stips”) are specific to oil and gas exploration, development, and production. They constitute restrictions that are placed on the lease to mitigate potential effects. They remain with the lease in that location and any following leaseholder is required to comply with the stipulations attached to the lease. They are not exclusive of the ROPs, but “in addition to.” The Authorized Officer may add additional stipulations to the lease that are developed through further NEPA analysis and as developed through consultation with other regulatory agencies.

Table 2.3-3. Comparison of Alternatives – Locatable and Salable Minerals

Management Actions	Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
Locatable Minerals	There are no available acres for mineral entry.	<p>Revoke ANCSA 17(d)(1) withdrawals.</p> <p>Of the 1.3 million acres of BLM-managed lands within the planning area, approximately 486,000 acres of unselected lands would be available for mineral entry (Figures 2.3-18 through 2.3-20).[*] Selected lands would be made available if the selection is rejected or relinquished.</p>	<p>Same as Alternative B (Figures 2.3-18, 2.3-21 and 2.3-22), except the following lands would be closed to mineral entry:</p> <ul style="list-style-type: none"> • Lake Carlanna Municipal Watershed (1,835 acres) (Figure 2.3-2). • Halibut Cove Forest Study Area (120 acres) (Figure 2.3-1). • Neacola Mountains ACEC (229,000 acres) (Figures 2.3-1 and 2.3-3). 	<p>Same as Alternative B (Figures 2.3-18, 2.3-23, and 2.3-24), except the following lands would be closed to mineral entry:</p> <ul style="list-style-type: none"> • Lake Carlanna Municipal Watershed (1,835 acres) (Figure 2.3-2). • Halibut Cove Forest Study Area (120 acres) (Figure 2.3-1).
	Approved Plans of Operations contain stipulations based on site-specific resource concerns.	Same as Alternative A, with the addition that approved Plans of Operations will adhere to the objectives and requirements as listed in the ROPs in Appendix D.		

Table 2.3-3 (continued). Comparison of Alternatives – Locatable and Salable Minerals

Management Actions	Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
Salable Minerals	Of the 1.3 million acres of BLM-managed lands within the planning area, approximately 486,000 acres of unselected lands would be available for sale of mineral materials.* Selected lands would be made available if the selection is rejected or relinquished. (For Alternative B, refer to Figures 2.3-18 through 2.3-20).		Same as Alternative A, except the following lands would be closed to sale: <ul style="list-style-type: none"> • Lake Carlanna Municipal Watershed (1,835 acres) (Figure 2.3-2). • Halibut Cove Forest Study Area (120 acres) (Figure 2.3-1). • Neacola Mountains ACEC (229,000 acres) (Figures 2.3-1 and 2.3-3). 	Same as Alternative A, except the following lands would be closed to sale: <ul style="list-style-type: none"> • Lake Carlanna Municipal Watershed (1,835 acres) (Figure 2.3-2). • Halibut Cove Forest Study Area (120 acres) (Figure 2.3-1).
	Approved Plans of Operations contain stipulations based on site-specific resource concerns.	Same as Alternative A, with the addition that approved Plans of Operations will adhere to the objectives and requirements as listed in the ROPs in Appendix D.		

Note: * Within the Ring of Fire planning area, approximately 798,000 acres of BLM-managed lands would remain withdrawn from mineral entry due to withdrawals other than ANCSA 17(d)(1).
 ACEC: Area of Critical Environmental Concern
 ANCSA: Alaska Native Claims Settlement Act
 BLM: Bureau of Land Management
 ROP: Required Operating Procedure

2.3.5 Off-Highway Vehicles

2.3.5.1 Objectives

BLM will ensure protection of natural resources from OHV effects, provide OHV access consistent with the provisions of ANILCA, and manage OHV access for resource development by applying ROPs and stipulations. Refer to Table 2.3-4 for a comparison of the OHV management actions proposed under each alternative.

2.3.5.2 Management Common to All Alternatives

Inventory and Monitoring

Under all alternatives, trail inventory and assessment work would continue. Inventory and assessment would be necessary to identify all existing trails and assess trail density and resource effects. This information would be used in implementation-level designation of specific trails. Inventory and assessment information would also be used to prioritize trail maintenance needs.

Implementation Level Planning

An implementation-level plan or integrated implementation plan is required for an SMA such as an ACEC or SRMA. These plans would inventory trails for that specific planning area, describe resource concerns or conflicts, and may describe specific designated trails, conditions, or limitations (seasonal, weight, or vehicle class, etc). The planning processes for these implementation plans would include public, State, and Native coordination. These plans would describe tools necessary for implementation (methods for signing specific trails, trailhead development, education/interpretation, map production, and law enforcement). They would also identify and prioritize specific maintenance needs, as well as opportunities for trail development or loops. Unencumbered BLM lands would be the priority for implementation-level planning.

Land Use Requirements

OHVs will use existing trails whenever possible. If necessary (e.g., game retrieval), travel off existing trails will be conducted in a manner that minimizes: a) disturbance of vegetation or soil stability, or effects to drainage systems; b) changing the character of, polluting, or introducing silt and sediment into streams, lakes, ponds, seeps, and/or marshes; and c) disturbance of fish and wildlife.

Permitted activities and uses that involve OHV use would adhere to permit stipulations stating that OHV use would be consistent with management in limited and closed areas. If necessary, permitted cross-country travel would be stipulated in a manner that minimizes effects (i.e., winter use or low ground pressure tires). Specific operating procedures related to OHVs can be found in the ROPs in Appendix D (see SOILS 15, VEG 12).

Access

The State of Alaska recognizes approximately 650 Revised Statute (R.S.) 2477 routes for access to lands throughout the State. The assertion of validity of these routes by State governments has not been recognized and current U.S. Department of the Interior (USDOI) policy is to defer any processing of R.S. 2477 assertions except where there is a demonstrated

and compelling need to make a determination. Land use planning decisions do not affect valid R.S. 2477 rights or future assertions; however, if a route were recognized, BLM would consider it as an existing trail where it crosses BLM-managed lands.

All proposals for OHV management considered below would be consistent with Section 811 of ANILCA, which allows for “appropriate use for subsistence purposes of snowmobiles, motorboats, and other means of surface transportation traditionally employed for such purposes by local residents, subject to reasonable regulation.” The following would be employed in future implementation planning to ensure consistency with Section 811:

- Distinction (by area) between recreational and subsistence uses.
- Allowances in areas “limited” to OHVs for subsistence use, which may include:
 - o Travel off existing or designated trails for game retrieval.
 - o Use of classes of vehicles otherwise restricted for recreational use.
 - o Lifting of seasonal restrictions during subsistence hunting seasons.

Applicable exceptions would be analyzed in implementation-level planning based on traditional use of a given area, use of the area for subsistence activities, and other management objectives for the area (also see the discussion of ANCSA 17(b) easements in Section 2.3.1).

What is the difference between this plan and the implementation-level plans?

An RMP is an overarching plan. It establishes goals and objectives, allowable uses, and management actions. From this planning effort, implementation-level plans (activity plans) are written. All implementation-level plans must tier to, and be in compliance with the RMP. These plans will address site-specific issues and uses. The implementation-level plans are written with more opportunities for public involvement, and should be completed within the next five years.

Table 2.3-4. Comparison of Alternatives – Off-Highway Vehicles

Management Actions	Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
OHV Designations	There are no OHV designations on BLM-managed lands within the planning area.	All BLM-managed lands within the planning area would be designated as "open" to OHV use.	<p>All BLM-managed lands would be designated as "limited" to OHV use.</p> <p>The "limited" designation is the same as the <i>Generally Allowed Uses on State Land</i>, which among other things, requires OHVs to stay on existing trails whenever possible (Appendix E).</p> <p>Limitations within the Knik River SRMA (Figure 2.3-5), the Haines Block SRMA (Figure 2.3-4), and the Neacola Mountains ACEC (Figure 2.3-3) would be further refined to meet the objectives of the SRMAs and the ACEC, and may include instituting seasonal closures, closure of some portions of the SMAs to OHVs, or the designation of and/or limitations to existing trails.</p>	<p>Limitations within the Knik River SRMA (Figure 2.3-5), the Haines Block SRMA (Figure 2.3-4 and Figure 2.3-2), and the Neacola Mountains ACEC (Figure 2.3-3) would be defined through the development of implementation plans to meet the objectives of the proposed SMAs. Implementation plans may include instituting seasonal closures, closure of some portions of the SMAs to OHVs, the designation of, and/or limitations to designated trails, and/or opening some portions of the proposed Knik River SRMA to OHV use.</p> <p>OHV use would be limited to existing roads and trails in all other areas. For these lands, this limitation is the same as the <i>Generally Allowed Uses on State Land</i>, which among other things, requires OHVs to stay on existing trails whenever possible (as described in Appendix E).</p>

Notes: ACEC: Area of Critical Environmental Concern
 BLM: Bureau of Land Management
 OHV: Off-Highway Vehicle
 SMA: Special Management Area
 SRMA: Special Recreation Management Area

2.3.6 Recreation

2.3.6.1 Objectives

BLM will manage recreation to maintain a diversity of recreational opportunities. Opportunities for commercial recreation will be provided consistent with area objectives for recreation management. Refer to Table 2.3-5 for a comparison of the recreation management actions proposed under each alternative.

2.3.6.2 Management Common to All Alternatives

Public Cabins

In general, BLM would consider existing structures, such as unauthorized cabins reclaimed by BLM, for public use cabins before the construction of new cabins. Planning may occur, but land status would need to be resolved before major investment occurs in a public cabin system.

Inventory and Monitoring

Monitoring would include the following (dependent on available staff and funding):

- Visitor use of both dispersed and developed sites.
- Monitoring of commercial use activities and compliance with conditions of the permit.
- Assessment of visitor and resident recreation experiences and benefits.

What is Benefits-Based Recreation Management?

BLM's recreation programs works to sustain the distinct and productive character of public lands recreation settings, and to produce and facilitate the attainment of value added recreational outcomes. In order to accomplish this, all of BLM's recreation activities will be managed collectively (rather than as independent activities), with emphasis on their complementary nature. Recreation initiatives and programs, operations, and staffing will be integrated with four basic recreation elements: management, marketing, monitoring, and administrative support. These elements will be managed to produce recreation opportunities targeted for identified recreation markets. BLM will cooperatively develop strategies with community-based recreation users and providers to identify and produce specific recreation experiences as beneficial outcomes. The recreation settings, upon which attainment of the identified experience and benefit outcome depend, will be maintained to sustain their distinct and productive character.

Table 2.3-5. Comparison of Alternatives – Recreation

Management Actions	Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
Special Management Areas	The Campbell Tract SRMA is the only SMA located within the Ring of Fire planning area.	No new SMAs (e.g., SRMAs or ACECs) would be recommended, except that the Campbell Tract SRMA would remain.	<p>The Knik River is designated as a SRMA (Figure 2.3-5), and managed through an associated implementation plan. The Haines Block is also designated as an SRMA (Figure 2.3-2 and Figure 2.3-4), and would be managed under an implementation plan.</p> <p>The Neacola Mountains is designated as an ACEC (Figure 2.3-3), and the recreational values of the area would be analyzed in the ACEC implementation plan.</p> <p>Public use cabins in the SRMAs and the ACEC would be considered if they are consistent with objectives described for the SRMAs or ACEC.</p> <p>The SRMAs and ACEC, including their objectives, are described in Appendix F.</p> <p>The Campbell Tract SRMA would remain.</p>	Same as Alternative C.

Notes: ACEC: Area of Critical Environmental Concern
SMA: Special Management Area
SRMA: Special Recreation Management Area

2.3.7 Visual Resources

2.3.7.1 Objectives

BLM would protect visual resources consistent with the multiple-use objectives of the PRMP/FEIS. VRM actions proposed under each alternative are compared in Table 2.3-6.

What Do VRM Classes Mean for Future Management?

During planning, BLM assigns VRM classes. These define the visual objectives that BLM intends to achieve for its lands. The objectives for the VRM classes are:

I—Preserve the existing character of the landscape; change to the characteristic landscape should be very low and not attract attention.

II—Preserve the existing character of the landscape; change to the characteristic landscape may be seen, but should be low and not attract the attention of the casual observer.

III—Partially retain the existing character of the landscape; change to the characteristic landscape should be moderate and may attract attention, but not dominate the view of the casual observer.

IV—Provides for action that would make major modifications to the existing character of the landscape; change to the characteristic landscape can be high, dominate the view, and be the major focus of the viewer.

Table 2.3-6. Comparison of Alternatives – Visual Resources

Management Actions	Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
VRM Classifications	No VRM classes are established on BLM-managed lands within the Ring of Fire planning area.	Manage all lands as VRM Class IV (Figures 2.4-1 through 2.4-3).	<p>Segments of 10 rivers were determined eligible as “wild” WSRs, but not suitable.*</p> <p>Alaska Peninsula/Aleutian Chain and Kodiak Regions (Figure 2.4-4):</p> <ul style="list-style-type: none"> • Barbara Creek • Reindeer Creek <p>Southcentral Region (Figure 2.4-5):</p> <ul style="list-style-type: none"> • Kirschner Lake Complex • Iniskin River • Ursus Cove Complex • Chilligan River <p>Southeast Region (Figure 2.4-6):</p> <ul style="list-style-type: none"> • Tsirku River • Tahini River • Chilkat River • Chilkoot River <p>Identified outstandingly remarkable values (ORVs) for these river segments would be taken into consideration when reviewing proposed actions that might have an effect on these values.</p> <p>Manage the Neacola Mountains ACEC (Figure 2.4-5), Lake Carlanna Municipal Watershed (Figure 2.4-6), and the Halibut Cove Forest Study Area as VRM Class II (Figure 2.4-5).</p> <p>Manage the Knik River SRMA as VRM Class IV (Figure 2.4-5).</p> <p>Manage all other lands as VRM Class III (Figures 2.4-4 through 2.4-6).</p>	<p>Manage the Lake Carlanna Municipal Watershed (Figure 2.4-9) and the Halibut Cove Forest Study Area as VRM Class II (Figure 2.4-8).</p> <p>Manage the Neacola Mountains ACEC as VRM Class II (Figure 2.4-8).</p> <p>Manage all other lands as VRM Class IV (Figures 2.4-7 through 2.4-9).</p>

Note: * The ten rivers that were determined eligible as “wild” WSRs each have scenic values associated with their eligibility. The remaining four eligible rivers (see Table 2.3-8) were tentatively classified as “recreational.”

ACEC: Area of Critical Environmental Concern
 ANCSA: Alaska Native Claims Settlement Act
 BLM: Bureau of Land Management

SRMA: Special Recreation Management Area
 VRM: Visual Resource Management
 WSR: Wild and Scenic River

2.3.8 Wildlife

2.3.8.1 Objectives

BLM will manage wildlife habitat to meet BLM Alaska's Statewide Land Health Standards, the goals of Alaska Department of Fish and Game (ADF&G) management plans (consistent with the Master Memorandum of Understanding [MOU] between BLM and ADF&G) (see Appendix K), and federal subsistence and threatened and endangered species mandates. BLM's land health standards include: ensure natural abundance and diversity of resources on public lands; protect and provide the opportunity for continued subsistence uses on public lands in compliance with Title VIII of ANILCA; maintain and enhance wildlife habitat to sustain or increase populations; perpetuate a diversity and abundance of waterfowl by managing wetlands and other habitat; and provide suitable habitat for birds of prey through conservation and management of essential habitat and prey base. Refer to Table 2.3-7 for a comparison of the wildlife management actions under each alternative.

2.3.8.2 Management Common to All Alternatives

In cooperation with ADF&G, BLM will conduct habitat assessments for game species, with priority afforded to areas that the Federal Subsistence Board and the State of Alaska have suggested. BLM will monitor wildlife habitat with priority afforded to areas where actions authorized by BLM will occur. Breeding bird survey transects, in conjunction with protocols established by the interagency Partners in Flight initiatives, will be established and monitored within budgetary constraints. BLM will ensure that actions authorized by BLM are consistent with the conservation needs of BLM's special status species in Alaska, and do not contribute to the need to list any special status species under the provisions of the Endangered Species Act (ESA) of 1973, as amended.

BLM will also establish and monitor breeding bird survey transects, and develop and participate in recovery partnership efforts to gain better understanding of threatened and endangered (T&E) bird occurrence and habitat on BLM-managed lands within planning area.

Table 2.3-7. Comparison of Alternatives – Wildlife

Management Actions	Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
Management Areas	BLM will manage wildlife habitat and address concerns on a case-by-case basis during review of permits.		Same as Alternative A. In addition, develop an implementation-level plan for the Knik River and Haines Block SRMAs and Neacola Block ACEC (Figures 2.3-2, 2.3-4 and 2.3-5) that address wildlife concerns in those areas.	

Notes: BLM: Bureau of Land Management
 SRMA: Special Recreation Management Area

2.3.9 Wild and Scenic Rivers

2.3.9.1 Objectives

BLM will maintain values that qualify rivers on BLM-managed lands for inclusion in the National WSR System (National System) through a public planning process and consistent with PRMP/FEIS goals. River segments that were determined to be eligible for WSR designation under each alternative are listed in Table 2.3-8.

What is the role of the RMP process in the creation of Wild and Scenic Rivers?

In the course of the RMP process, BLM identifies rivers in the planning area that are *eligible* and *suitable* for inclusion in the National System.

Eligibility is based on the physical attributes of a river. *Eligible* rivers are free-flowing and possess one or more “outstandingly remarkable values” (ORVs), such as exemplary scenery, recreation opportunities, or characteristics that are unusual enough to attract visitors to the region, geologic features that are rare or unique to the region, and regionally or nationally important fish or wildlife. The Draft RMP/EIS identified segments of 14 rivers as eligible for WSR designation.

Suitability is a management determination of the appropriateness of adding eligible rivers to the National System. BLM assesses numerous factors, including the manageability of adding the river to the system (cost, legal jurisdiction), support for designation, and the compatibility of designation with other overall management of the area—thus a river might be considered appropriate in the framework of an alternative emphasizing recreation or environmental protection, but not in one that contemplates significant development. The PRMP/FEIS determined that no eligible river segments were suitable for WSR designation.

If BLM determines that a river is eligible and suitable as part of the WSR National System, it will recommend its designation in the Record of Decision (ROD) for the RMP. The Secretary of the Interior can choose to forward or change the recommendation; and Congress and the President must ultimately decide whether to make the river part of the system.

Table 2.3-8. Comparison of Alternatives – Wild and Scenic Rivers

Management Actions	Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
Special Management Area Designation	No National System designations are recommended.	Same as Alternative A.	<p>Segments of 14 rivers were determined eligible but not suitable as WSRs:</p> <p>Alaska Peninsula/Aleutian Chain and Kodiak Regions (Figure 2.4-4):</p> <ul style="list-style-type: none"> • Barbara Creek • Reindeer Creek • Elbow Creek <p>Southcentral Region (Figure 2.4-5):</p> <ul style="list-style-type: none"> • Eagle River: S. Fork • Kirschner Lake Complex • Iniskin River • McArthur River • Ursus Cove Complex • Chilligan River <p>Southeast Region (Figure 2.4-6):</p> <ul style="list-style-type: none"> • Tsirku River • Tahini River • Chilkat River • Chilkoot River • Chilkoot Lake Powersite Withdrawal <p>Identified ORVs for these river segments would be taken into consideration when reviewing proposed actions that might have an effect on the ORV.</p>	Same as Alternative A.

Note: ANCSA: Alaska Native Claims Settlement Act
National System: National Wild and Scenic Rivers System

2.4 Programs with Management Common to All Alternatives

This section describes resources or resource uses with management actions common to all alternatives, where there is no variability among alternatives. Reasons for the lack of variability include specific regulatory requirements that apply regardless of alternatives, memoranda of understanding with other State and federal agencies associated with resource management, and previous or ongoing planning activities that provide specific guidance for management of these resources and programs.

2.4.1 Air Resources

2.4.1.1 Objectives

BLM will protect and enhance the quality of air resources associated with BLM-managed lands in the planning area. BLM will also consider and, if practical, minimize the effects of smoke from wildfire and prescribed burns to human health, communities, recreation, and tourism. Smoke and its public health effects are a parameter in fire suppression decisions.

2.4.1.2 Management Common to All Alternatives

BLM will stipulate that all direct or authorized emission-generating activities occurring on BLM-managed lands within the Ring of Fire planning area comply with federal and State air quality laws and regulations. All permittees will be required to mitigate any activity that may result in air pollution. BLM will also implement interagency wildland fire smoke mitigation measures adopted by the Alaska Wildland Fire Coordinating Group and consider public health and safety in all fire management activities.

2.4.2 Cultural Resources

2.4.2.1 Objectives

BLM will seek to preserve key cultural properties listed on the National Register of Historic Places [NRHP]) such as Dalton Cache (NRHP), Hyder Storehouse No. 4 (NRHP), Clover Pass School (NRHP), and Sitka Blockhouse (not eligible for NRHP at this time, but it is a high value interpretive site). All three sites are located in the Southeast region; the Dalton Cache is located approximately 50 miles northwest of the City of Haines on the Haines Highway; the Hyder Storehouse No. 4 is located near the town of Hyder, at the international border between British Columbia and Alaska; the Clover Pass School is located approximately 14 miles north of the town of Ketchikan; and the Sitka Blockhouse is located in downtown Sitka. The Talkeetna Village Airstrip, located in the Southcentral region is also listed on the NRHP.

2.4.2.2 Management Common to All Alternatives

The Dalton Cache, Hyder Storehouse No. 4, the Clover Pass School, and the Sitka Blockhouse would be managed for public use (long-term preservation and on-site interpretation). All cultural properties on BLM-managed lands in the Ring of Fire planning area would be managed for their scientific use (preserved until their research potential is realized) until and unless they are determined to be appropriate to be discharged from management. The Talkeetna Village Airstrip will be managed to balance its historic use as an airstrip, and the interpretive values associated with its NRHP designation until it is determined appropriate for BLM to transfer title or

management of the property to another entity. The Clover Pass School joined the group of NRHP managed by BLM after the Draft RMP/EIS was issued in the fall of 2005. The land underlying the school may be patented to the Ketchikan Gateway Borough under the R&PP Act thus removing this site from BLM management.

All actions that may impact cultural resources will comply with the National Historic Preservation Act (NHPA), Sections 106 and 110, and with the Native American Graves Protection and Repatriation Act (NAGPRA), as well as laws governing the protection or consideration of cultural resources.

How does BLM manage the National Historic Register Properties within the Ring of Fire planning area?

The BLM ensures that land use decisions will not have inadvertent adverse effects upon the qualities that qualify cultural properties for the National Register or on the use(s) determined appropriate through the BLM evaluation process (see BLM Manual Section 8110). This is accomplished through consultation with the State Historic Preservation Officer (SHPO) and Advisory Council on Historic Preservation, according to procedures set out in the National Programmatic Agreement and Alaska's BLM-SHPO protocol. BLM's first choice is to avoid historic properties that would otherwise be affected by a proposed land use, if it is reasonable and feasible to do so.

2.4.3 Wildland Fire and Fuels

2.4.3.1 Objectives

Without exception, firefighter and public safety is, and will be, the first priority in all fire management activities. Management of the wildland fire and fuels program would focus on keeping key ecosystem components intact and functioning within their historical range and based on land use and resource objectives.

Fire management options recognize fire as an essential ecological process and natural change agent of Alaskan ecosystems and provide for the protection of human life and site-specific values. Wildland fire will be used to protect and maintain, natural and cultural resources and, as nearly as possible, function in its natural ecological role. Rehabilitation and restoration efforts will be undertaken to sustain ecosystems, public health, safety, and to help communities protect infrastructure.

Fire management planning, preparedness, prevention, suppression, fire use, restoration and rehabilitation, monitoring, research, and education will be conducted on an interagency basis. BLM will work together with State and federal agencies, other affected groups, and individuals to prevent unauthorized ignition of wildland fires.

The objectives of the BLM wildland fire and fuels management program are:

- Protect human life and prioritize firefighter and public safety.
- Provide appropriate levels of protection with available firefighting resources.
- Use wildland fire and fuel treatments to meet land use and resource objectives.

- Reduce risk and cost of uncontrolled wildland fire through wildland fire use, prescribed fire, manual, or mechanical treatment.
- Reduce adverse effects of fire management activities.
- Continue interagency collaboration and cooperation.

2.4.3.2 Management Common to All Alternatives

Current wildland fire and fuels management direction for all lands within the Ring of Fire planning are contained in the BLM-AK Land Use Plan Amendment for Wildfire and Fuels Management (BLM 2005). BLM would continue their current fire management practices under all alternatives. Wildland fire and fuels treatment activities would be managed for firefighter and public safety, consistent with land use and resource objectives, and BLM would balance costs of fire management with values at risk. The full range of fire management activities would be used to achieve ecosystem sustainability including the interrelated ecological, economic, and social components. Response to wildland fires will be based on ecological, social, and legal consequences of the fire. Setting priorities among protecting human communities and community infrastructure, other property and improvements, and natural and cultural resources will be based on the values to be protected, human health and safety, and the costs of protection. The Alaska interagency wildland fire suppression management option categories (Critical, Full, Limited, and Modified) and site-specific designations (Critical, Full, Avoid, and Non-sensitive) would be used to identify the appropriate management responses to a wildland fire. Management options will continue to be designated on a landscape-scale in collaboration with adjacent landowners and across administrative boundaries; site-specific designations that warrant higher levels of protection may occur.

Fuels management activities are necessary and important resource management tools to accomplish land and resource management objectives. Fuels treatment by use of wildland fire, prescribed fire, manual, or mechanical means is a viable option for management.

In addition to supporting resource program objectives through the use of wildland fire and fuels treatments, the wildland fire and fuels management program strives to:

- Provide appropriate protection to BLM physical developments, facilities, and administrative sites while balancing costs with value-at-risk.
- Review management option designations annually and adjust as warranted to meet current land use, resource objectives, protection needs, laws, suppression concerns, mandates, or policies.
- Authorize suppression actions or fuel treatments on BLM-managed lands to help prevent wildland fire from occurring or spreading to an area with a higher suppression management option designation on BLM-managed lands, inholdings, or those of adjacent landowners.
- Manage vegetation on BLM-managed lands adjacent to populated areas to reduce risk of wildfires.
- Suppress fires at minimum cost considering firefighter and public safety, benefits, values to be protected, and resource objectives.
- Minimize adverse effects of wildland fire in areas where the natural role of fire conflicts with current land use.

- Minimize effects of suppression actions.
- Monitor for the cumulative effects of wildland fire and suppression actions, and the effects of excluding fire from the landscape.
- Implement Alaska interagency policy and procedural decisions made by the Alaska Wildland Fire Coordinating Group
- Adhere to federal and State laws and regulations.
- Support scientific research of wildland fire.
- Work cooperatively with cooperators and partners on landscape-scale multi-jurisdictional projects.

Lands within the Ring of Fire planning area are protected by the State of Alaska Division of Forestry (DOF) under the provisions of the Reciprocal Fire Protection Agreement (1322-LAA-99-0012) between the State of Alaska, Department of Natural Resources. The purpose of the agreement is to coordinate fire suppression efforts between the BLM Alaska Fire Service (AFS) and DOF. AFS and DOF agreed to provide wildland fire protection services within their Protection Area according to the terms of the agreement and in coordination with the individual land managers/owners, including providing full suppression on Native Allotments.

2.4.4 Fisheries

2.4.4.1 Objectives

BLM would maintain and protect fish habitat on public lands and provide for the habitat needs of fish resources necessary to maintain or restore such populations and to ensure the continued public use, economic, and subsistence benefits of such resources.

Fish habitat will be managed to meet the goals of ADF&G management plans, consistent with the Master MOU between BLM and ADF&G (see text box on p. 1-11, and Appendix K), and with current court decisions related to Title VIII of ANILCA.

2.4.4.2 Management Common to All Alternatives

BLM will support continued monitoring and assessment of riparian areas. This information will be used as a baseline to support maintenance and restoration projects.

BLM will take into consideration other resources or resource uses (e.g., wildlife, vegetation, lands, and realty, etc.) and will cooperate with other federal agencies and the State in identifying need for relocation, closure, or maintenance of OHV trails to avoid key fish habitat features.

BLM will identify waters on BLM-managed lands within the planning area that support anadromous fish for inclusion into the ADF&G anadromous waters catalog, and will identify federal submerged lands on BLM-managed lands within the Ring of Fire planning area for federal subsistence priority uses.

2.4.5 Forestry

2.4.5.1 Objectives

BLM will provide personal use and subsistence wood products for local consumption and will allow for opportunities for commercial harvests. The natural range of variation in plant composition and structure as well as the high value of natural resources will be sustained. Commercial resource values will be maintained or enhanced.

2.4.5.2 Management Common to All Alternatives

In areas where Healthy Forests Restoration Act authorities are to be used, BLM would identify old growth forest stands or describe a process for identifying old growth forest stands in the Land Use Plan based on the structure and composition characteristic of the forest type.

BLM will identify potential commercial harvest areas and high interest personal use areas. If any of these areas are identified within the proposed SRMAs and ACEC, management will be consistent with the objectives of the proposed SRMAs and ACEC.

All forestry management practices would be conducted consistent with guidelines described in the ROPs and/or stipulations (Appendix D).

2.4.6 Grazing (Livestock and Reindeer)

2.4.6.1 Objectives

BLM will provide seasonal grazing opportunities for casual day-use grazing, or for saddle and pack livestock consistent with terrain characteristics and protection of the soil, vegetation, and watershed.

2.4.6.2 Management Common to All Alternatives

Grazing on BLM-managed lands within the Ring of Fire planning area would be conducted consistent with guidelines described in the ROPs and/or stipulations (Appendix D). Where not compatible with vulnerable wildlife populations, habitats, vegetation, or areas of high erosion and slope instability, grazing would be prohibited.

BLM would consult with ADF&G and other appropriate agencies to ensure no significant conflict would occur with wildlife or habitat.

2.4.7 Hazardous Materials

2.4.7.1 Objectives

BLM will ensure that all activities occurring on BLM-managed lands within the Ring of Fire planning area comply with federal and State hazardous materials standards and that all federal and State mandates, laws, EOs, regulations, and policies are met.

2.4.7.2 Management Common to All Alternatives

Adverse effects resulting from past hazardous materials management on BLM lands will be mitigated subject to the availability of funds. BLM will prevent creation of new hazardous material sites through implementation of best management practices for all land use permits, leases, ROW, and mining claims, and would include pollution prevention measures in all of its permits, leases, and grants of ROW.

BLM will coordinate and consult with appropriate regulatory agencies for all cleanup plans and will notify and coordinate hazardous materials activities with specific Native corporations on Native-selected lands.

2.4.8 Iditarod National Historic Trail

BLM is the appointed administrator of the Iditarod National Historic Trail (NHT); however the Iditarod NHT does not cross BLM-managed land within the Ring of Fire planning area. On federal lands, the Iditarod NHT is a CSU under the definition of ANILCA (Section 102(4)). As such, the Iditarod NHT is subject to all applicable provisions of ANILCA. The trail will continue to be cooperatively managed under the terms of a comprehensive management plan specific to the Iditarod NHT prepared by BLM AFO, and any new lands donated to the Iditarod NHT will be managed accordingly. BLM will continue to issue permits and use authorizations for commercial activities (e.g., guiding, outfitting, and tours) and competitive recreation events (e.g., Iditarod Sled Dog Race and Iron Dog Snowmobile Race) and will maintain trail-associated recreation facilities on public lands.

Iditarod National Historic Trail

The Iditarod NHT is the only national trail in the nation for which BLM has lead administrative authority, and the only congressionally designated trail in Alaska. The 2,400-mile trail system crosses a number of jurisdictions, including USFS, U.S. Fish and Wildlife Service (FWS), Department of Defense (DOD), State of Alaska, BLM, boroughs, municipalities, Alaska Native corporations, and private lands. BLM manages its own portions of the trail (approx. 420 miles), and coordinates management through MOUs for trail segments owned by other entities. The historic trail's primary route stretches from Seward to Nome, a distance of 938 miles. Side and connecting trails add an additional 1,400 miles.

BLM is responsible for overall coordination of activities and events taking place along the trail. BLM permits three major competitive events each year: the Iditarod Trail Sled Dog Race, the Iron Dog snowmachine race, and the Ultrasport (human endurance race). Although the BLM manages the trail within the Ring of Fire planning area, it actually manages no lands that the trail crosses.

2.4.9 Paleontology

2.4.9.1 Objectives

BLM will protect and preserve important paleontological resources.

2.4.9.2 Management Common to All Alternatives

BLM will maintain the integrity of known paleontological resources occurring on BLM-managed lands within the Ring of Fire planning area. Actions that may impact paleontological resources will comply with NEPA, Antiquities Act, FLPMA, Federal Cave Resources Protection Act, and other protective measures (Appendix D) intended to mitigate adverse effects.

2.4.10 Renewable Energy

As described in Section 3.3.9, some potential does exist for the development of solar, wind, or biomass renewable energy facilities on BLM-managed lands within the Ring of Fire planning area. No authorizations for these purposes have been issued on BLM-managed lands within the planning area, and to date no interest has been expressed in doing so. BLM would consider applications for permit or lease to conduct such developments, subject to the constraints for leasing and permitting on a case-by-case basis.

2.4.11 Soils

2.4.11.1 Objectives

BLM will manage and maintain soils to promote healthy, sustainable, and fully functioning ecosystems that support a wide range of public values and uses. Desired ecological conditions for soil resources are described in the BLM Alaska Statewide Land Health Standards (BLM 2004u).

2.4.11.2 Management Common to All Alternatives

BLM will provide for a wide variety of public land uses without compromising the long-term health of soil resources. BLM will require permittees to mitigate for all activities that have the potential to cause accelerated soil erosion.

2.4.12 Subsistence

2.4.12.1 Objectives

BLM will conserve healthy populations of subsistence resources through management and protection of habitat through subsistence harvest permitting and regulations, and by providing reasonable access to subsistence resources.

2.4.12.2 Management Common to All Alternatives

Decisions made within this PRMP/FEIS will not affect BLM's role in administration of subsistence on federal public lands. Under all alternatives, BLM would continue to carry out or participate in the following administrative functions:

- **Involve Subsistence Users in Issues Identification**—Ten Regional Advisory Councils (RACs) were established in Section 100.22 of the Subsistence Management Regulations for Public Lands in Alaska as an administrative structure to provide a “meaningful voice” for subsistence users in the management process. BLM field staff members, along with those of other involved agencies, meet twice each year with the RACs to identify emerging issues in conservation, allocation, and appropriate regulation of subsistence harvests.
- **Manage Land/Habitat, Assess Effects to Subsistence**—ANILCA Section 810 establishes a distinct set of requirements for assessment of potential effects on subsistence from federal land decisions. These assessments supplement the analysis of potential effects to subsistence resources and uses during conventional NEPA environmental reviews (Appendix I).
- **Monitor Resource Populations Used for Subsistence Purposes**—When these monitoring efforts are focused on key subsistence resources, they are a major contributor to the quality of subsistence management efforts.
- **Develop Interagency Subsistence Management Regulations and Policies**—With heavy reliance on RAC input and interagency coordination, the development of subsistence regulations is a multi-step process that ensures all concerns are addressed.
- **Manage Subsistence Harvests**—Although regulatory authority for subsistence management rests with the Federal Subsistence Board, implementation of federal subsistence hunting and fishing opportunities rests largely on local federal agency field staff. Tasks include distribution of federal regulation booklets, responding to questions, issuing federal subsistence permits, contacting hunters while in the field, and assisting in tallying permit and harvest reports. However, the State will continue to regulate hunting, fishing, and trapping on all lands in Alaska unless, and until, superseded by federal subsistence regulations for federal public lands.

2.4.13 Water Resources

2.4.13.1 Objectives

BLM will promote healthy, sustainable ecosystems and ensure that all activities occurring on BLM-managed lands within the planning area comply with federal and State water quality standards. Desired ecological conditions for watersheds and water resources are described in the BLM Alaska Statewide Health Standards (BLM 2004u).

2.4.13.2 Management Common to All Alternatives

BLM will promote properly functioning watersheds, including their upland, riparian, wetland, and aquatic components. Through management of water resources, BLM will support the objectives of the fisheries program through protection of aquatic habitat, and the recreation program through protection of rivers and other recreation areas.

BLM will require permittees to perform mitigation for all activities that may result in accelerated soil erosion or other adverse effects on water quality. BLM will consult and coordinate with other federal, State, and local agencies, as directed by the Watershed Protection and Flood Prevention Act (16 United States Code [U.S.C.] 1001-1009) and the Clean Water Act (CWA) (33 U.S.C. 1251). In order to comply with the Safe Drinking Water Act and protect the quality and quantity of drinking water, BLM would consult with owners/operators of potentially affected, federally regulated public water supply systems when proposing management actions in State-

designated Source Water Protection Areas. Public water supply systems are defined as systems that provide water for human consumption through pipes or other constructed conveyances to at least 15 service connections or serve an average of at least 25 people for at least 60 days a year. The locations of public water supply systems and Source Water Protection Areas are available from the Alaska Department of Environmental Conservation (ADEC) Drinking Water and Wastewater Program.

BLM also intends to file for water rights under State law to secure water needed for management purposes.

2.4.14 Floodplains

2.4.14.1 Objectives

BLM's objectives for floodplain management are to reduce the loss of life and property and the disruption of societal and economic pursuits caused by flooding; and to sustain, restore, or enhance the natural resources, ecosystems, and other functions of the floodplain. Development and implementation of sustainable solutions to floodplain management will help to avoid repetitive losses and fiscal outlays (U.S. Bureau of Reclamation 1995).

Management objectives for developed lands should include flow management, channel maintenance, control of floodplain encroachment, hazard mitigation on critical infrastructure, environmental preservation and restoration, emergency management and preparedness, public safety, and flood recovery. Floodplain management is a continuous process of decision-making and implementation with the goal of appropriate use of the floodplains. Appropriate use could be any activity or action that is compatible with both the acceptable risks to human life and property from floods, and the natural functions of the floodplain. Uses of floodplains would include stormwater management, erosion control, open space, opportunities for scientific study, outdoor education, recreation, cultural preservation, and compatible economic utilization of floodplain resources (U.S. Bureau of Reclamation 1995).

2.4.14.2 Management Common to All Alternatives

Section 7260 of the BLM Manual sets BLM floodplain management guidelines. For administrative purposes, the 100-year floodplain serves as a basis for floodplain management on public land. It is based on the Flood Insurance Rate Maps (FIRMs) prepared by the Federal Emergency Management Agency (FEMA).

Flood damage can be reduced by applying controls on the use of the floodplains through planning, development, and management. Watershed and floodplain management issues will be addressed by using an approach that accounts for watershed hydrology, river hydraulics, land form and channel geomorphology, river mechanics and sedimentation, land use, water quality and quantity, ecosystems, and functions of the floodplain. Because there is a paucity of information pertaining to specific flood hazard zones in much of the BLM Ring of Fire planning area, projects occurring in floodplains should address watershed flow management and flood risk assessments on a case-by-case basis. Flood hazard boundaries can be mapped by determining the base flood elevation of a stream channel or other waterbody and comparing to local topographic elevations.

2.4.15 Wetlands-Riparian

2.4.15.1 Objectives

BLM will take action to minimize the destruction, loss, or degradation of wetlands and riparian areas, and to preserve and enhance their natural and beneficial values. Desired ecological conditions for wetlands-riparian areas are described in the BLM Alaska Statewide Land Health Standards (BLM 2004u).

2.4.15.2 Management Common to All Alternatives

Lessees and all parties receiving BLM authorizations for activities will be required to comply with numerous protective measures for wetlands and riparian areas listed in the ROPs, stipulations, and Standard Lease Terms (see Appendix D).

2.4.16 Vegetation

2.4.16.1 Objectives

BLM will take action to minimize adverse effects on vegetation. BLM will promote healthy, sustainable, fully functioning ecosystems by maintaining plant communities that support a wide range of public values and uses. Management will be conducted to prevent the spread of invasive plant species, including noxious weeds. Desired ecological conditions for vegetation are described in the BLM Alaska Statewide Land Health Standards (BLM 2004u).

2.4.16.2 Management Common to All Alternatives

Lessees and all parties receiving BLM authorizations for activities will be required to comply with numerous protective measures for vegetation listed in the ROPs, stipulations, and Standard Lease Terms (see Appendix D).

2.5 Comparison of Alternatives

Table 2.5-1, the Alternatives Summary Table, presents a summary of management actions proposed for BLM resource programs that were discussed in Section 2.3 which differ between Alternatives A, B, C, and D. Management actions that are common among all alternatives (Section 2.4) are not presented in this table.

Table 2.5-1. Alternatives Summary Table

Management Actions		Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
Lands and Realty	Sales	No lands are currently identified for sale.	Three parcels located in Cape Pole on the west side of Prince of Wales Island totaling 5.03 acres: <ul style="list-style-type: none"> U.S. Survey 2615, Lot 2. U.S. Survey 2616, Lot 12. U.S. Survey 2616, Lot 14. One parcel located in Ketchikan comprising the Southern Southeast Aquaculture Association totaling 3.10 acres: <ul style="list-style-type: none"> U.S. Survey 3835, Lot 106. Four parcels located in Tenakee Hot Springs: <ul style="list-style-type: none"> U.S. Survey 1409, MSR 1, MSR 2, MSR 3, and MSR 4, located within C.R.M., T. 47 S., R. 63 E., sec. 21. 	No lands would be identified for sale.	Same as Alternative B.
	Acquisitions	Consider acquisition of lands and easements from willing landowners on a case-by-case basis to meet specific plan objectives.		Same as Alternatives A and B. In addition, emphasis areas for acquisition from willing landowners would be considered in the Neacola Mountains ACEC (Figures 2.3-1 and 2.3-3), Haines Block SRMA (Figures 2.3-2 and 2.3-4), Knik River SRMA (Figures 2.3-1 and 2.3-5), and the Iditarod NHT to further SMA and CSU objectives.	
	Withdrawals	Retain ANCSA 17(d)(1) withdrawals.	Revoke existing 17(d)(1) withdrawals.	Unselected lands not given exception below (241,000 acres) and any selected lands not excepted below (387,000 acres) whose selection is relinquished or revoked would be open for fluid mineral leasing (Figures 2.3-13 through 2.3-15). Exceptions (unselected): <ul style="list-style-type: none"> Lake Carlanna Municipal Watershed (1,835 acres) (Figure 2.3-2). Halibut Cove Forest Study Area (120 acres) (Figure 2.3-1). Neacola Mountains ACEC (229,000 acres) (Figures 2.3-1 and 2.3-3). Exceptions (selected): <ul style="list-style-type: none"> Haines Block SRMA (273,000 acres) (Figures 2.3-2 and 2.3-4). Knik River SRMA (79,612 acres) (Figures 2.3-1 and 2.3-5). Ursus Cove (6,742 acres) (Figure 2.3-7). 	Same as Alternative B.
	Right-of-Way	There would be no avoidance or exclusion areas for ROWs identified on BLM-managed lands within the planning area.		The Mountain Goat Monitoring and Control Area within the proposed Haines Block SRMA (approximately 113,000 acres) (Figures 2.3-2 and 2.3-4) and the Neacola Mountains ACEC (229,000 acres) (Figures 2.3-1 and 2.3-3) would be identified as avoidance areas for ROWs.	The Mountain Goat Monitoring and Control Area within the Haines Block SRMA (approximately 113,000 acres) is identified as an avoidance area for ROWs (Figures 2.3-2 and 2.3-4).
Fluid Leasable Minerals	Areas Open to Fluid Mineral Leasing with Standard Lease Stipulations	No lands are identified as open for fluid mineral leasing except to protect from drainage.	All unselected lands (486,000 acres) and any selected lands (798,000 acres) whose selections would be relinquished or rejected would be open for fluid mineral leasing ** (refer to Figures 2.3-10 through 2.3-12). ** Existing withdrawals other than ANCSA 17(d)(1), of 798,000 acres of BLM-managed lands, would remain withdrawn from fluid mineral leasing.	All unselected lands not excepted below (241,000 acres) and any selected lands not excepted below (387,000 acres) whose selections would be relinquished or rejected would be open for fluid mineral leasing (Figure 2.3-13 through 2.3-15). Exceptions (unselected): <ul style="list-style-type: none"> Lake Carlanna Municipal Watershed (1,835 acres) (Figure 2.3-2). Halibut Cove Forest Study Area (120 acres) (Figure 2.3-1). Neacola Mountains ACEC (229,000 acres) (Figures 2.3-1 and 2.3-3). Exceptions (selected): <ul style="list-style-type: none"> Haines Block SRMA (273,000 acres) (Figures 2.3-2 and 2.3-4). Knik River SRMA (79,612 acres) (Figures 2.3-1 and 2.3-5). Ursus Cove (6,742 acres) (Figure 2.3-7). 	All unselected lands not excepted below (486,000 acres) and any selected lands (798,000 acres) whose selection is relinquished or rejected would be open for fluid mineral leasing (Figures 2.3-16 and 2.3-17). Exceptions (unselected): <ul style="list-style-type: none"> Lake Carlanna Municipal Watershed (1,835 acres) (Figure 2.3-2). Halibut Cove Forest Study Area (120 acres) (Figure 2.3-1).

Management Actions		Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
		Notwithstanding the provisions listed within this management action, in cases in which oil and gas is being drained, or may be drained, from federal subsurface by adjacent development activities, BLM may lease such lands.			
	Constraints in Lands Opened to Fluid Mineral Leasing	Any leases issued to address drainage would be subject to standard lease terms.	Stipulations and ROPs described in Appendix D apply on all lands open to oil and gas leasing.		
				In addition, To protect onshore habitat of marine mammals, wintering waterfowl, northern sea otters, and brown bear habitat, NSO would be required on BLM-managed lands within a ¼ mile inland from mean high tide in the Cape Lieskof area of the Alaska Peninsula (Figure 2.3-9). To protect habitat for migratory birds within the Palmer Hay Flats (Figure 2.3-5), no oil and gas exploration activity or road building is allowed from March 15 to June 1, and from September 1 to October 31.	
Locatable and Salable Minerals	Locatable Minerals	There are no available acres for mineral entry.	Revoke ANCSA 17(d)(1) withdrawals. Of the 1.3 million acres of BLM-managed lands within the planning area, approximately 486,000 acres of unselected lands would be available for mineral entry (Figures 2.3-18 through 2.3-20).** Selected lands would be made available if the selection is rejected or relinquished. ** Within the Ring of Fire planning area, approximately 798,000 acres of BLM-managed lands would remain withdrawn from mineral entry due to withdrawals other than ANCSA 17(d)(1).	Same as Alternative B (Figures 2.3-18, 2.3-21 and 2.3-22), except the following lands would be closed to mineral entry: <ul style="list-style-type: none">• Lake Carlanna Municipal Watershed (1,835 acres) (Figure 2.3-2).• Halibut Cove Forest Study Area (120 acres) (Figure 2.3-1).• Neacola Mountains ACEC (229,000 acres) (Figures 2.3-1 and 2.3-3).	Same as Alternative B (Figures 2.3-18, 2.3-23 and 2.3-24), except the following lands would be closed to mineral entry: <ul style="list-style-type: none">• Lake Carlanna Municipal Watershed (1,835 acres) (Figure 2.3-2).• Halibut Cove Forest Study Area (120 acres) (Figure 2.3-1).
		Approved Plans of Operations contain stipulations based on site-specific resource concerns.	Same as Alternative A, with the addition that approved Plans of Operations will contain guidelines as listed in the ROPs in Appendix D.		
Locatable and Salable Minerals cont'd	Salable Minerals	Of the 1.3 million acres of BLM-managed lands within the planning area, approximately 486,000 acres of unselected lands would be available for sale of mineral materials.** Selected lands would be made available if the selection is rejected or relinquished. ** Within the Ring of Fire planning area, approximately 798,000 acres of BLM-managed lands would remain withdrawn from mineral entry due to withdrawals other than ANCSA 17(d)(1).		Same as Alternative A, except the following lands would be closed to sale: <ul style="list-style-type: none">• Lake Carlanna Municipal Watershed (1,835 acres) (Figure 2.3-2).• Halibut Cove Forest Study Area (120 acres) (Figure 2.3-1).• Neacola Mountains ACEC (229,000 acres) (Figures 2.3-1 and 2.3-3).	Same as Alternative A, except the following lands would be closed to sale: <ul style="list-style-type: none">• Lake Carlanna Municipal Watershed (1,835 acres) (Figure 2.3-2).• Halibut Cove Forest Study Area (120 acres) (Figure 2.3-1).
		Approved Plans of Operations contain stipulations based on site-specific resource concerns.	Same as Alternative A, with the addition that approved Plans of Operations will contain guidelines as listed in the ROPs in Appendix D.		
	OHV Designations	There are no OHV designations on BLM-managed lands within the Ring of Fire planning area.	All BLM-managed lands within the Ring of Fire planning area would be designated as "open" to OHV use.	All BLM-managed lands would be designated as "limited" to OHV use. The "limited" designation is the same as the <i>Generally Allowed Uses on State Land</i> , which among other things, requires OHVs to stay on existing trails whenever possible (as described in Appendix E). Limitations within the Knik River SRMA (Figure 2.3-5), the Haines Block SRMA (Figures 2.3-2 and 2.3-4), and the Neacola Mountains ACEC (Figure 2.3-3) would be further refined to meet the objectives of the SRMAs and the ACEC, and may include instituting seasonal closures, closure of some portions of the SMAs to OHVs, or the designation of and/or limitations to designated trails.	Limitations within the Knik River SRMA (Figure 2.3-5), the Haines Block SRMA (Figures 2.3-2 and 2.3-4), and the Neacola Mountains ACEC (Figure 2.3-3) would be defined through the development of implementation plans to meet the objectives of the SMAs. Implementation plans may include instituting seasonal closures, closure of some portions of the SMAs to OHVs, the designation of, and/or limitations to designated trails, and/or opening some portions of the proposed Knik River SRMA to OHV use. OHV use would be limited to existing roads and trails in all other areas. For these lands, this limitation is the same as the <i>Generally Allowed Uses on State Land</i> , which among other things, requires OHVs to stay on existing trails whenever possible (as described in Appendix E).

Table 2.5-1 (continued). Alternatives Summary Table

Management Actions		Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
Visual Resources	Special Management Areas	The Campbell Tract SRMA is located within the Ring of Fire planning area.	No new SMAs (e.g., SRMAs or ACECs) would be recommended, except that the Campbell Tract SRMA would remain.	<p>The Knik River is designated as an SRMA (Figure 2.3-5), and managed through an associated implementation plan. The Haines Block is also designated as an SRMA (Figures 2.3-2 and 2.3-4), and will be managed under an implementation plan.</p> <p>The Neacola Mountains is designated as an ACEC (Figure 2.3-3), and the recreational values of the area will be analyzed in the ACEC implementation plan.</p> <p>Public use cabins in the SRMAs and the ACEC would be considered if they are consistent with objectives described for the SRMAs or ACEC.</p> <p>The SRMAs and ACEC, including their objectives, are described in Appendix F.</p> <p>The Campbell Tract SRMA would remain.</p>	Same as Alternative C.
	VRM Classifications	No VRM classes are established on BLM-managed lands within the Ring of Fire planning area.	Manage all lands as VRM Class IV (Figures 2.4-1 through 2.4-3).	<p>Segments of 10 rivers were determined eligible as “wild” WSRs but not were not determined suitable:</p> <p>Alaska Peninsula/Aleutian Chain and Kodiak Regions (Figure 2.4-4):</p> <ul style="list-style-type: none">• Barbara Creek• Reindeer Creek <p>Southcentral Region (Figure 2.4-5):</p> <ul style="list-style-type: none">• Kirschner Lake Complex• Iniskin River• Ursus Cove Complex• Chilligan River <p>Southeast Region (Figure 2.4-6):</p> <ul style="list-style-type: none">• Tsirku River• Tahini River• Chilkat River• Chilkoot River <p>Identified ORVs for these river segments would be taken into consideration when reviewing proposed actions that might have an effect on the ORV.</p> <p>Manage the Neacola Mountains ACEC (Figure 2.4-5), Lake Carlanna Municipal Watershed (Figure 2.4-6), and the Halibut Cove Forest Study Area as VRM Class II (Figure 2.4-5).</p> <p>Manage the Knik River SRMA as VRM Class IV (Figure 2.4-5).</p> <p>Manage all other lands as VRM Class III (Figures 2.4-4 through 2.4-6).</p>	<p>Manage the Lake Carlanna Municipal Watershed (Figure 2.4-9) and the Halibut Cove Forest Study Area as VRM Class II (Figure 2.4-8).</p> <p>Manage the Neacola Mountains ACEC as VRM Class II (Figure 2.4-8).</p> <p>Manage all other lands as VRM Class IV (Figures 2.4-7 through 2.4-9).</p>

Table 2.5-1 (continued). Alternatives Summary Table

Management Actions		Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
Wild and Scenic Rivers	Special Management Area Designation	No National System designations are recommended.	Same as Alternative A.	<p>Segments of 14 rivers were determined eligible but not suitable as WSRs:</p> <p>Alaska Peninsula/Aleutian Chain and Kodiak Regions (Figure 2.4-4):</p> <ul style="list-style-type: none">• Barbara Creek• Reindeer Creek• Elbow Creek <p>Southcentral Region (Figure 2.4-5):</p> <ul style="list-style-type: none">• Eagle River: S. Fork• Kirschner Lake Complex• Iniskin River• McArthur River• Ursus Cove Complex• Chilligan River <p>Southeast Region (Figure 2.4-6):</p> <ul style="list-style-type: none">• Tsirku River• Tahini River• Chilkat River• Chilkoot River• Chilkoot Lake Powersite Withdrawal <p>Identified ORVs for these river segments would be taken into consideration when reviewing proposed actions that might have an effect on the ORV.</p>	Same as Alternative A.
Wildlife	Management Areas	BLM will manage wildlife habitat and address concerns on a case-by-case basis during review of permits.		Same as Alternative A. In addition, develop an implementation plan for the Knik River and Haines Block SRMAs (Figures 2.3-4 and 2.3-5).	

2.6 Comparison of Effects

The following table (Table 2.6-1) summarizes the direct, indirect, and cumulative effects under each alternative for all resources where environmental consequences were evaluated and found to be possible. Discussions of direct and indirect effects can be found in Section 4.3, and cumulative effects are discussed in Section 4.4.

For the purposes of this analysis, a total of 2,618 acres will be used as a conservative estimate when referencing potential mineral development on BLM-managed lands within the planning area. The Mineral Potential Report (Appendix G) indicates that a total of 2,558 acres have potential for oil and gas disturbance (all ownerships, not just BLM), and less than 60 acres of BLM-managed lands have the potential for locatable mineral entry.

Table 2.6-1. Summary and Comparison of Effects on Resources by Alternative

Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
EFFECTS ON SOILS			
Low levels of timber harvest (around 20 acres per year) could cause localized adverse effects on soils from vegetation clearing and soil compaction. In areas of high OHV use, such as the Knik River Valley, there may be localized areas of adverse effects due to soil compaction and erosion. Given the small portion of the planning area affected, effects on soils would be minor.	A larger acreage of soils could be disturbed compared to Alternative A due to the increase in lands available for mineral exploration and development (2,618 acres or less). However, the potential for mineral development is low. Effects on soils from mineral development activity could include oil spills, soil compaction, and loss of surrounding vegetation. Adverse effects from timber harvest and OHV use would be the same as under Alternative A. The portion of the planning area affected would be less than one percent of BLM-managed lands.	A smaller acreage of soils could be disturbed by mineral development compared to Alternatives A and B due to restrictions placed on certain sensitive or unique areas. Identification of SMAs would restrict land use activities in certain areas, thereby reducing potential degradation and compaction of soils relative to current conditions. OHV use would be “limited” to existing roads and trails, which would restrict soil degradation to specific areas. Timber harvest (around 20 acres per year) could cause localized adverse effects from vegetative clearing and soil compaction. The portion of the planning area affected would be less than one percent of BLM-managed lands.	A smaller acreage of soils could be disturbed by mineral development compared to Alternatives A and B due to restrictions placed on certain sensitive or unique areas, although there are fewer restrictions than under Alternative C. Management actions, including identification of SMAs, would restrict land use activities in certain areas; thereby, reducing degradation and compaction of soils relative to current conditions. OHV use would be “limited” to existing roads and trails, which would restrict soil degradation to specific areas. Timber harvest (around 20 acres per year) would cause localized adverse effects from vegetative clearing and soil compaction. The portion of the planning area affected would be less than one percent of BLM-managed lands.
Cumulative Effects: Past effects to soil resources have resulted from climate change, volcanic eruptions, oil spills, mining and transportation projects, and construction of facilities within the planning area. The growth of urban areas (Anchorage, Mat-Su Valley) have also affected soils through compaction and degradation associated with development. Future actions related to climate change, timber sales, transportation projects, and mineral development have the potential to adversely affect soil resources through compaction, contamination, soil erosion, loss of organic matter, and melting of permafrost where present within the planning area. Given the relatively low level of timber harvest activity (approximately 20 acres per year), mineral development potential (less than 2,618 acres), OHV activity (localized concentrations of adverse effects), and recreation use (unconsolidated parcels), the potential contribution to cumulative effects on soil resources from RFFAs are greater than the contribution of BLM management actions on a regional scale. Localized adverse effects from OHV use has a moderate contribution to cumulative effects in areas of high use, such as the Knik River; although natural forces provide some degree of annual mitigation. ROPs and Stipulations (Appendix D) under Alternatives B, C, and D and implementation planning under Alternatives C and D would help reduce cumulative effects in specific locations.			

Table 2.6-1 (continued). Summary and Comparison of Effects on Resources by Alternative

Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
EFFECTS ON WATER RESOURCES			
<p>Activities other than mineral development, such as timber harvest (approximately 20 acres per year) or recreation, could have localized effects on water resources. In areas of high OHV use, such as the Knik River Valley, there may be localized areas of adverse effects through alterations in drainage patterns and degradation of water quality. Given the small portion of the planning area affected, effects on water resources would be minor.</p>	<p>Effects to water resources from future management actions proposed under Alternative B would be limited to a small portion of BLM lands along the road network, areas of higher mineral potential, and areas of concentrated OHV use. A larger acreage of water resources could be disturbed compared to Alternative A due to the increase in lands available for mineral exploration and development (2,618 acres or less). However, the potential for mineral development is low. Resultant effects of mineral development activity on water resources could include increased erosion and sedimentation, temporary impoundments or diversions, water temperature increases, or other changes in water quality. Adverse effects from OHV use would be the same as under Alternative A. The portion of the planning area affected would be less than one percent of BLM-managed lands.</p>	<p>Effects to water resources from actions proposed under Alternative C would be localized and limited in scale. Effects would occur over a smaller acreage than Alternatives A or B due to restrictions on mineral development placed on certain sensitive or unique areas, and limitations on OHV use to existing roads and trails. Identification of SMAs could restrict land use activities in certain areas, thereby reducing adverse effects on water resources in those areas relative to current conditions. OHV use would be “limited” to existing roads and trails, which would restrict effects on water resources to specific areas. Timber harvest (around 20 acres per year) could cause localized adverse effects from vegetative clearing and construction of roads. The likelihood of adverse effects on water resources would be less than under other alternatives.</p>	<p>Effects would occur over a smaller acreage than Alternatives A or B due to restrictions on mineral development placed on certain sensitive or unique areas, and limitations on OHV use to existing roads and trails, although there are fewer restrictions than under Alternative C. Opening additional lands to mineral entry through withdrawal revocation could increase potential adverse effects to water resources; however, the potential is low, and would occur on less than one percent of BLM-managed lands (2,618 acres or less). OHV use would be “limited” to existing roads and trails, which would confine localized effects on water resources. Timber harvest (around 20 acres per year) would cause localized adverse effects from vegetative clearing and construction of roads. The identified SMAs would restrict land use activities in certain areas; thereby, preventing adverse effects on water resources relative to current conditions. The likelihood of adverse effects on water resources would be less than under Alternative B.</p>
<p>Cumulative Effects: Past actions that have affected water resources throughout the planning area include climate change, volcanic eruptions, mining activities, transportation projects, construction of facilities, and timber harvesting. Water quantity, water quality, and drainage patterns have all been influenced by these actions. Future actions associated with transportation projects and mineral exploration may have adverse effects on water quality and drainage patterns, although effects would vary by location. Road construction can introduce increased levels of pollutants and alter water quality, as can mineral activity. Given the relatively low level of timber harvest activity (approximately 20 acres per year), mineral development potential (less than 2,618 acres), OHV activity (localized concentrations of adverse effects), and recreation use (unconsolidated parcels), the potential contribution to cumulative effects on water resources from RFFAs are greater than the contribution of BLM management actions on a regional scale. Localized adverse effects from OHV use has a moderate contribution to cumulative effects in areas of high use, such as the Knik River; although natural forces provide some degree of annual mitigation. ROPs and Stipulations (Appendix D) under Alternatives B, C, and D and implementation planning under Alternatives C and D would help reduce cumulative effects in specific locations.</p>			

Table 2.6-1 (continued). Summary and Comparison of Effects on Resources by Alternative

Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
EFFECTS ON FISHERIES AND AQUATIC HABITATS			
Effects to fish and fish habitat from management proposed under Alternative A are likely to be limited to a very small portion of BLM-managed lands. In areas of high OHV use, such as the Knik River Valley, there may be localized areas of adverse effects through degradation of water quality and stream morphology. Effects from low levels of timber harvest or dispersed recreation could have localized effects on fish and fish habitat. Overall, effects would be minor.	A larger acreage of fish habitat could be disturbed compared to Alternative A due to the increase in lands available for mineral exploration and development (2,618 acres or less). However, the potential for mineral development is low. Effects on fish and fish habitat from mineral development activity could include increased mortality, and degradation of water quality and fish habitat. Adverse effects from timber harvest and OHV use would be the same as under Alternative A. ROPs and Stipulations (Appendix D) would offer additional protections to fish and fish habitat.	Effects to fish and fish habitat would be similar to Alternative A, and are likely to be limited in scale, or concentrated in specific areas. Effects could occur over a smaller acreage than Alternatives A or B due to restrictions on mineral development placed on certain sensitive or unique areas, and limitations on OHV use to existing roads and trails. Identification of SMAs could restrict land use activities in certain areas, thereby reducing adverse effects on fish and fish habitat relative to current conditions. Timber harvest (around 20 acres per year), ROWs, mining, and mineral development (2,618 acres or less) could cause localized adverse effects from construction of roads and fish habitat degradation. ROPs and Stipulations (Appendix D) would offer additional protections to fish and fish habitat. The likelihood of adverse effects on fish and fish habitat would be less than other alternatives.	Fish and fish habitat could have a greater potential for adverse effects under this alternative compared to Alternatives A or C. The potential for adverse effects would be less than under Alternative B due to restrictions on mineral development and OHV use. Identified Proposed SMAs could restrict land use activities in certain areas, thereby reducing adverse effects on fish and fish habitat relative to current conditions as under Alternative C. OHV use would be “limited” to existing roads and trails, which would offer seasonal protections to fish and fish habitat in specific areas as under Alternative C. Timber harvest (around 20 acres per year), ROWs, mining, and mineral development (2,618 acres or less) could cause localized adverse effects from construction of roads and degradation of fish habitat. ROPs and Stipulations (Appendix D) would offer additional protections to fish and fish habitat.
Cumulative Effects: Past actions that have affected fish and fish habitats throughout the planning area include climate change, volcanic eruptions, mining activities, transportation projects, construction of facilities, and timber harvesting. Adverse effects have included the loss of riparian and spawning habitat, impediments to fish migration, and deterioration of water quality. Future actions associated with transportation projects and mineral exploration may have adverse effects on water quality and habitat, although effects would vary by location. Road construction can introduce increased levels of pollutants and alter water quality, as can mineral activity. Given the relatively low level of timber harvest activity (approximately 20 acres per year), mineral development potential (less than 2,618 acres), OHV activity (localized concentrations of adverse effects), and recreation use (unconsolidated parcels), the potential contribution to cumulative effects for fish and fish habitat from RFFAs are greater than the contribution of BLM management actions on a regional scale. Localized adverse effects from OHV use has a moderate contribution to cumulative effects in areas of high use, such as the Knik River; although natural forces provide some degree of annual mitigation. Synergistic effects to fish and fish habitat as a result of mineral exploration and development under any of the alternatives are not anticipated. ROPs and Stipulations (Appendix D) in Alternatives B, C, and D and implementation planning under Alternatives C and D would help reduce cumulative effects in specific locations.			

Table 2.6-1 (continued). Summary and Comparison of Effects on Resources by Alternative

Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
EFFECTS ON WILDLIFE			
Effects to wildlife and wildlife habitat from management proposed under Alternative A are likely to be limited to a very small portion of BLM-managed lands. In areas of high OHV use, such as the Knik River Valley, there may be localized areas of adverse effects on wildlife species through habitat degradation or displacement due to noise and activity. Effects from low levels of timber harvest or dispersed recreation would have temporary, localized effects on wildlife through displacement. Overall, effects would be localized, and would not occur at the population level.	Effects to wildlife would occur over more of the planning area compared to Alternative A, and a greater number of animals would potentially be disturbed due to the increase in lands available for mineral exploration and development (2,618 acres or less). However, the potential for mineral development is low. Effects on wildlife from mineral activity could include habitat degradation and displacement. Adverse effects from timber harvest and OHV use would be the same as under Alternative A. ROPs and Stipulations (Appendix D) would offer additional protection to wildlife species. Overall, effects would be localized, and would not occur at the population level.	Effects to wildlife would occur over a smaller acreage than under Alternatives A or B due to restrictions on mineral development placed on certain sensitive wildlife areas or unique habitats, and limitations on OHV use to existing roads and trails. Management actions, including seasonal protection against wildlife displacement in specific areas, identification of SMAs, and adoption of ROPs and Stipulations (Appendix D), would restrict land use activities in certain areas; thereby, reducing adverse effects on wildlife and wildlife habitat relative to current conditions. Timber harvest (around 20 acres per year) or mineral development (2,618 acres or less) could cause localized adverse effects from construction of roads and habitat degradation. The likelihood of effects on wildlife would be less compared to other alternatives. Overall, effects would be localized, and would not occur at the population level.	Wildlife and wildlife habitat have a greater potential for adverse effects under this alternative as compared to Alternatives A or C. The potential for adverse effects would be less than under Alternative B due to restrictions on mineral development and OHV use. SMAs and ROPs and Stipulations (Appendix D) could restrict land use activities in certain areas; thereby, reducing adverse effects on wildlife and wildlife habitat relative to current conditions. OHV use would be “limited” to existing roads and trails, which would offer protection against wildlife displacement and habitat alteration in specific areas. Timber harvest (around 20 acres per year) or mineral development (2,618 acres or less) could cause localized adverse effects from construction of roads and habitat degradation. Overall, effects would be localized, and would not occur at the population level.
Cumulative Effects: Past actions that have affected wildlife and wildlife habitat throughout the planning area include mining activities, urban development, transportation projects, construction of facilities, timber harvesting, and wildlife harvest. These activities have resulted in site-specific loss or fragmentation of habitat, disturbance of wildlife species, and alterations to migratory patterns. Future actions associated with transportation projects and mineral exploration may have adverse effects on wildlife through displacement and habitat degradation, although effects would vary by location. Road construction can alter migratory patterns, as can mineral activity. Climate change may also affect the distribution and abundance of specific wildlife populations on a long-term basis. Given the relatively low level of timber harvest activity (approximately 20 acres per year), mineral development potential (less than 2,618 acres), OHV activity (localized concentrations of adverse effects), and recreation use (unconsolidated parcels), the contribution to cumulative effects on wildlife and wildlife habitat from RFFAs are greater than the potential contribution of BLM management actions on a regional scale. Synergistic effects to wildlife species as a result of mineral exploration and development under any of the alternatives are not anticipated. ROPs and Stipulations (Appendix D) in Alternatives B, C, and D, and implementation planning under Alternatives C and D would help reduce cumulative effects in specific locations.			

Table 2.6-1 (continued). Summary and Comparison of Effects on Resources by Alternative

Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
EFFECTS ON VEGETATION			
Activities other than mineral development, timber harvest (around 20 acres per year), and OHV use would have negligible effects on vegetation within the project area. In areas of high OHV use, such as the Knik River Valley, there may be localized areas of adverse effects on vegetation through habitat degradation or destruction. Any mineral development activity, if it were to occur, would likely be on small acreages. Consequently, only a small portion (less than one percent) of the vegetation found on BLM-managed lands may be affected.	Effects to vegetation would occur over more of the planning area compared to Alternative A, and a larger number of acres could potentially be disturbed due to the increase in lands available for mineral exploration and development (2,618 acres or less). However, the potential for mineral development is low. Effects on vegetation from mineral activity could include habitat degradation and destruction. Timber harvest (around 20 acres per year) could cause temporary localized adverse effects through the direct loss of vegetation. Adverse effects from OHV use and other non-mineral related activities would be the same as under Alternative A. ROPs and Stipulations (Appendix D) would offer additional protection to vegetation.	Effects to vegetation would occur over a smaller acreage than Alternatives A or B due to restrictions on mineral development placed on certain sensitive or unique habitats, and limitations on OHV use to existing roads and trails. Management actions, including identification of SMAs and adoption of ROPs and Stipulations (Appendix D), would restrict land use activities in certain areas; thereby, reducing adverse effects on vegetation relative to current conditions. OHV use would be “limited” to existing roads and trails, which would offer protection against vegetation loss or degradation in specific areas. Timber harvest (around 20 acres per year) could cause temporary localized adverse effects through the direct loss of vegetation. The likelihood of adverse effects on vegetation would be less than under other alternatives.	There is a greater potential for effects on vegetation under this alternative compared to Alternatives A or C. The potential for adverse effects would be less than under Alternative B due to restrictions on mineral development and OHV use. Identified SMAs, and ROPs and Stipulations (Appendix D) could restrict land use activities in certain areas; thereby, reducing adverse effects on vegetation relative to current conditions. OHV use would be “limited” to existing roads and trails, which would offer protection against vegetation loss or degradation in specific areas. Timber harvest (around 20 acres per year) could cause localized adverse effects through the direct loss of vegetation.
Cumulative Effects: Past disturbances to vegetative communities within the planning area have resulted from climate change, volcanic eruptions, community development, transportation projects, military activities, mining activities, cattle and reindeer grazing, fox farms, spruce bark beetle infestations, fire management, and timber harvests. Effects have been both direct (removal of vegetation) and indirect (degradation of water quality). Future actions associated with population growth, transportation projects, and mineral exploration may have adverse effects on vegetation through direct loss of vegetation, alteration of the vegetative community, and changes to the availability and flow of surface and/or groundwater, although effects would vary by location. Given the relatively low level of timber harvest activity (approximately 20 acres per year), mineral development potential (less than 2,618 acres), OHV activity (localized concentrations of adverse effects), and recreation use (unconsolidated parcels), the potential contribution to cumulative effects on vegetation from RFFAs are greater than the contribution of BLM management actions on a regional scale. Synergistic effects to vegetation species as a result of mineral exploration and development under any of the alternatives are not anticipated. ROPs and Stipulations (Appendix D) in Alternatives B, C, and D and implementation planning under Alternatives C and D would help reduce cumulative effects in specific locations.			

Table 2.6-1 (continued). Summary and Comparison of Effects on Resources by Alternative

Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
EFFECTS ON WETLANDS-RIPARIAN			
Activities other than mineral development and OHV use would have negligible effects on wetland and riparian resources within the project area. In areas of high OHV use, such as the Knik River Valley, there may be localized areas of adverse effects on wetlands through habitat degradation or destruction. Any mineral development activity, if it were to occur, would likely be to small acreages. Consequently, only a small portion (less than one percent) of the wetland and riparian resources found on BLM-managed lands may be affected.	Effects on wetlands and riparian resources could occur over more of the planning area compared to Alternative A, and a larger number of acres could potentially be disturbed due to the increase in lands available for mineral exploration and development (2,618 acres or less). However, the potential for mineral development is low. Effects on wetland and riparian resources from mineral development activity could include habitat degradation and induced flooding due to loss of wetland functions. Adverse effects from OHV use and other non-mineral related activities would be the same as Alternative A. ROPs and Stipulations (Appendix D) would offer additional protection to wetland and riparian resources.	Effects on wetlands and riparian resources would occur over a smaller acreage than Alternatives A or B due to restrictions on mineral development placed on certain sensitive or unique habitats, and limitations on OHV use to existing roads and trails. Management actions, including identification of SMAs and adoption of ROPs and Stipulations (Appendix D), would restrict land use activities in certain areas; thereby, reducing adverse effects on wetlands and riparian resources relative to current conditions. OHV use would be “limited” to existing roads and trails, which could offer protection against wetland loss or degradation in specific areas. The likelihood of adverse effects on wetland and riparian resources would be less than under other alternatives.	There is a greater potential for adverse effects on wetlands and riparian resources under this alternative as compared to Alternatives A or C, but less potential for adverse effects as compared to Alternative B due to restrictions on mineral development and OHV use. SMAs and ROPs and Stipulations (Appendix D) could restrict land use activities in certain areas, thereby reducing adverse effects on wetland and riparian resources relative to current conditions. OHV use would be “limited” to existing roads and trails, which would offer protection against wetland degradation in specific areas.
Cumulative Effects: Past disturbances to wetland/riparian habitats within the planning area have resulted from climate change, commercial, industrial and residential development, marine facilities, transportation facilities, and peat mining. Effects have been both direct (destruction of habitat) and indirect (degradation of water quality or habitat function). Future actions associated with population growth, transportation projects, and mineral exploration may have adverse effects on wetland and riparian resources through the destruction of habitat, alteration of the wetland/riparian species, and the control of flow of surface and/or groundwater, although effects would vary by location. Most (greater than 98 percent) of BLM wetland and riparian lands are in pristine condition. Given the relatively low mineral development potential (less than 2,618 acres), OHV activity (localized concentrations of adverse effects), and recreation use (unconsolidated parcels), the contribution to cumulative effects on wetland and riparian resources from RFFAs are greater than the potential contribution of BLM management actions on a regional scale. Synergistic effects to wetlands as a result of mineral exploration and development under any of the alternatives are not anticipated. ROPs and Stipulations (Appendix D) in Alternatives B, C, and D and implementation planning under Alternatives C and D would help reduce cumulative effects in specific locations.			

Table 2.6-1 (continued). Summary and Comparison of Effects on Resources by Alternative

Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
EFFECTS ON VISUAL RESOURCES			
In areas of high OHV use, such as the Knik River Valley, there may be adverse effects on visual resources through the alteration of the existing visual landscape from OHV trails. Any mineral development activity, if it were to occur, would likely be on small acreages. Consequently only a small portion (less than one percent) of BLM-managed lands may incur development that would affect visual resources.	Effects to visual resources would occur over more of the planning area compared to Alternative A, and a larger number of acres could potentially be disturbed due to the increase in lands available for mineral exploration and development (2,618 acres or less). However, the potential for mineral development is low. Adverse effects from timber harvest (approximately 20 acres per year) and OHV use would be the same as Alternative A. ROPs and Stipulations (Appendix D) would offer additional development restrictions that could mitigate effects to visual resources. However, the entire planning area would be designated as VRM Class IV, which allows for major landscape modifications.	Effects to visual resources would occur over a smaller acreage than under Alternatives A or B due to more restrictive VRM classifications in several areas, restrictions on mineral development for certain sensitive or unique habitats, and limitations on OHV use to existing roads and trails. Management actions, including identification of SMAs, and adoption of ROPs and Stipulations (Appendix D), could restrict land use activities in particular areas; thereby, reducing adverse effects on visual resources relative to current conditions. The likelihood of adverse effects on visual resources would be less than under other alternatives.	There is a greater potential for adverse effects on visual resources under this alternative as compared to Alternative A or C, but less potential for adverse effects as compared to Alternative B due to restrictions on mineral development and limiting OHV use to existing roads and trails. Management actions, including identification of SMAs, and adoption of ROPs and Stipulations (Appendix D), could restrict land use activities in particular areas; thereby, reducing adverse effects on visual resources relative to current conditions.
Cumulative Effects: Visual resources throughout the planning area have been affected by new development associated with population growth, military activities, mining activity, road projects, and timber harvests. Naturally occurring events, such as volcanic eruptions, earthquakes, landslides, avalanches, wildland fires, or floods have also led to changes in the visual landscape. Future construction of roads and man-made facilities also has the potential to affect visual resources. Given the relatively low mineral development potential (less than 2,618 acres), OHV activity (localized concentrations of adverse effects), and recreation use (unconsolidated parcels), the potential contribution to cumulative effects on visual resources from RFFAs are greater than the contribution of BLM management actions on a regional scale. ROPs and Stipulations (Appendix D) in Alternatives B, C, and D and implementation planning and more restrictive VRM classifications under Alternatives C and D, would help reduce cumulative effects in specific locations.			

Table 2.6-1 (continued). Summary and Comparison of Effects on Resources by Alternative

Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
EFFECTS ON PALEONTOLOGICAL RESOURCES			
In areas of high OHV use, such as the Knik River Valley, there may be adverse effects on paleontological resources through the damage to surface features from unrestricted use. Any mineral development activity, if it were to occur, would likely be small acreages. Consequently, only a small portion (less than one percent) of BLM-managed lands may incur development that would affect paleontological resources. Low levels of timber harvest (approximately 20 acres per year) or dispersed recreation could cause localized effects. Given the small portion of the planning area affected, effects on paleontological resources would be minor.	Effects would occur over more of the planning area than Alternative A, and a larger number of acres would potentially be disturbed due to the increase in lands available for mineral exploration and development (2,618 acres or less). However, the potential for mineral development is low. Adverse effects from timber harvest (approximately 20 acres per year) and OHV use would be the same as under Alternative A. ROPs and Stipulations (Appendix D) would also offer additional development restrictions that could mitigate effects to paleontological resources.	Effects would occur over a smaller acreage than Alternatives A or B due to restrictions on mineral development placed on certain sensitive or unique habitats, and OHV use being limited to existing roads and trails. Management actions, including identification of SMAs, and adoption of ROPs and Stipulations (Appendix D), could restrict land use activities in particular areas, thereby reducing adverse effects on paleontological resources relative to current conditions. The likelihood of adverse effects on paleontological resources would be less than under other alternatives.	There is a greater potential for adverse effects on paleontological resources under this alternative compared to Alternatives A or C, but less potential for adverse effects as compared to Alternative B due to restrictions on mineral development and limiting OHV use to existing roads and trails. Management actions, including identification of SMAs, and adoption of ROPs and Stipulations (Appendix D), could restrict land use activities in particular areas, thereby reducing adverse effects on paleontological resources relative to current conditions.
Cumulative Effects: Past disturbances to paleontological resources in localized areas have resulted from mining and transportation projects, timber harvesting, recreation activities, construction of facilities, wildland fires, and military activities throughout the planning area. Future development associated with transportation projects, mineral exploration, and population growth may have long-term adverse effects on paleontological resources, depending on the adoption and effectiveness of mitigation measures. Future natural events could damage or destroy paleontological resources. Given the relatively low mineral development potential (less than 2,618 acres), OHV activity (localized concentrations of adverse effects), and recreation use (unconsolidated parcels), the potential contribution to cumulative effects on paleontological resources from RFFAs are greater than the contribution of BLM management actions on a regional scale. ROPs and Stipulations (Appendix D) in Alternatives B, C, and D and implementation planning under Alternatives C and D, would help reduce cumulative effects in specific locations.			

Table 2.6-1 (continued). Summary and Comparison of Effects on Resources by Alternative

Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
EFFECTS ON CULTURAL RESOURCES			
<p>Surveys for cultural resources would be conducted prior to all ground-disturbing activities that require advance authorization (timber harvest, mineral development). In areas of high OHV use, such as the Knik River Valley, there may be adverse effects on cultural resources through the damage to surface features from unrestricted use. Any mineral development activity, if it were to occur, would likely be small acreages. Consequently only a small portion (less than one percent) of BLM-managed lands may see development that would affect cultural resources. Low levels of timber harvest (approximately 20 acres per year) or dispersed recreation could cause localized effects. Given the small portion of the planning area affected, effects on cultural resources would be minor.</p>	<p>Effects on cultural resources would occur over more of the planning area compared to Alternative A, and larger number of acres could potentially be disturbed due to the increase in lands available for mineral exploration and development (2,618 acres or less). However, the potential for mineral development is low. Adverse effects from timber harvest (approximately 20 acres per year) and OHV use would be the same as under Alternative A. ROPs and Stipulations (Appendix D) would also offer additional development restrictions that could mitigate effects to cultural resources. Surveys for cultural resources would also be conducted prior to all ground-disturbing activities that require advance authorization.</p>	<p>Effects on cultural resources would occur over a smaller acreage than Alternatives A or B due to restrictions on mineral development for certain sensitive or unique habitats, and limitations on OHV use to existing roads and trails. Management actions, including identification of SMAs, and adoption of ROPs and Stipulations (Appendix D), could restrict land use activities in particular areas, thereby reducing adverse effects on cultural resources relative to current conditions. The likelihood of adverse effects on cultural resources would be less than under other alternatives. Surveys for cultural resources would also be conducted prior to all ground-disturbing activities that require advance authorization.</p>	<p>There is a greater potential for effects on cultural resources under this alternative compared to Alternatives A or C, but less potential for adverse effects as compared to Alternative B, due to restrictions on mineral development and OHV use being limited to existing roads and trails. Management actions, including identification of SMAs, and adoption of ROPs and Stipulations (Appendix D), could restrict land use activities in particular areas, thereby reducing adverse effects on cultural resources relative to current conditions. Surveys for cultural resources would also be conducted prior to all ground-disturbing activities that require advance authorization.</p>
<p>Cumulative Effects: Past disturbances to cultural resources in localized areas have resulted from mining and transportation projects, timber harvesting, recreation activities, construction of facilities, wildland fires, and military activities throughout the planning area. Naturally occurring events such as tectonic shifts and post-glacial uplift have affected the condition of cultural resources. Future development associated with transportation projects, mineral exploration, and population growth may have long-term adverse effects on cultural resources, depending on the adoption and effectiveness of mitigation measures. Future natural events could damage or destroy cultural resources. Surveys for cultural resources would be conducted prior to all ground-disturbing activities that require advance authorization. Given the relatively low mineral development potential (less than 2,618 acres), OHV activity (localized concentrations of adverse effects), and recreation use (unconsolidated parcels), the potential contribution to cumulative effects on cultural resources from RFFAs are greater than the contribution of BLM management actions on a regional scale. ROPs and Stipulations (Appendix D) in Alternatives B, C, and D and implementation planning under Alternatives C and D, would help reduce cumulative effects in specific locations.</p>			

Table 2.6-1 (continued). Summary and Comparison of Effects on Resources by Alternative

Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
EFFECTS ON LANDS AND REALTY			
The continuation of ANCSA 17(d)(1) withdrawals would affect the availability of public land for mineral use, although development activity is currently low. OHV use would remain undesignated, and activities in high use areas such as the Knik River Valley could contribute to adverse effects on habitat, adjacent land use, and public safety.	Eight specific small parcels of land would be offered for sale, and the revocation of ANCSA 17(d)(1) withdrawals could result in an increase in lands and realty authorizations. However, the potential for mineral development is considered low (2,618 acres or less). ROPs and Stipulations (Appendix D) would restrict land use activities in certain areas. Effects from OHV use would be the same as under Alternative A. All lands would be managed under VRM Class IV, which is the least restrictive classification.	The continuation of ANCSA 17(d)(1) withdrawals would affect the availability of public land for mineral use, although development potential is low. Emphasis for land acquisitions from willing sellers would be placed on the three SMAs and the Iditarod NHT. The amount of land available for mineral development activity is less than under Alternative B due to specific areas identified as closed to mineral entry. Management actions, including identification of SMAs, and adoption of ROPs and Stipulations (Appendix D), would restrict land use activities in certain areas through implementation-level planning efforts.	Eight small parcels of land would be offered for sale, and the revocation of ANCSA 17(d)(1) withdrawals could result in an increase in lands and realty authorizations. However, the potential for mineral development is considered low (2,618 acres or less). ROPs and Stipulations (Appendix D) would restrict land use activities in certain areas. Emphasis for land acquisitions from willing sellers would be placed on the three SMAs and the Iditarod NHT. The identification of SMAs would restrict land use activities in certain areas through activity-level planning efforts.
Cumulative Effects: Changes in land tenure have occurred as a result of the Alaska Statehood Act, the Native Allotment Act, ANCSA, ANILCA, FLPMA, and the R&PP Act. Reasonably foreseeable future actions associated with mineral development activity, commercial recreation, and transportation projects would result in some minor, site-specific changes to land tenure, land authorizations, and coordination of land use plans. Other changes in land tenure are expected to continue at current rates until 2009, or until all selected lands have been settled. Land authorizations would be expected to increase as population and development within the planning area increases. Given the relatively low level of timber harvest activity (approximately 20 acres per year), mineral development potential (less than 2,618 acres), OHV activity (localized concentrations of adverse effects), and recreation use (unconsolidated parcels), the potential contribution to cumulative effects on lands and realty from RFFAs are greater than the contribution of BLM management actions on a regional scale. ROPs and Stipulations (Appendix D) in Alternatives B, C, and D and implementation planning under Alternatives C and D, would help reduce cumulative effects in specific locations.			

Table 2.6-1 (continued). Summary and Comparison of Effects on Resources by Alternative

Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
EFFECTS ON LEASABLE MINERALS			
Mineral development is unlikely under this alternative due to low mineral development potential (2,558 acres).	Some additional lands would be made available for mineral exploration and development through the revocation of 17(d)(1) withdrawals. VRM Class IV management would be prescribed for all lands, and would cause minimal adverse effects on development practices. Any permitted or leasing activities would have to comply with ROPs and Stipulations (Appendix D).	Mineral development is unlikely under this alternative due to low mineral development potential (2,558 acres). Several specific areas would be closed to mineral development. Future planning associated with the SMAs or VRM classifications under this alternative could result in additional restrictions for mineral development within those areas after a period of public review and comment. Any permitted or leasing activities would have to comply with ROPs and Stipulations (Appendix D).	Some additional lands would be made available for mineral exploration and development through the revocation of 17(d)(1) withdrawals. The potential for adverse effects would be similar to under Alternative B, although the mineral development potential is low (2,558 acres). Several specific areas would be closed to mineral development. Future planning associated with the SMAs or VRM classifications proposed under this alternative could result in additional restrictions for mineral development within those areas after a period of public review and comment. Any permitted or leasing activities would have to comply with ROPs and Stipulations (Appendix D).
Cumulative Effects: Industry interest in the exploration and development of oil and gas and CBNG within the planning area (primarily Cook Inlet and the Mat-Su Valley) is expected to continue over the next 10 to 15 years. Future external actions, such as the Knik Arm Bridge project, and general road improvements throughout the southcentral region are expected to reduce exploration and/or development costs, which may increase overall oil and gas activities. The contribution of proposed management actions to potential cumulative effects would be greatest under Alternatives B and D. ROPs and Stipulations (Appendix D) in Alternatives B, C, and D and implementation planning for SMAs and more restrictive VRM classifications under Alternatives C and D, could contribute to cumulative effects in specific locations.			

Table 2.6-1 (continued). Summary and Comparison of Effects on Resources by Alternative

Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
EFFECTS ON LOCATABLE AND SALABLE MINERALS			
Existing locatable and salable mineral activities would slightly reduce overall reserves. Localized salable mineral activities in areas with no existing extraction sites may experience adverse effects on locatables and salables from excavation.	Some additional lands would be made available for locatable and salable mineral exploration and development through the revocation of 17(d)(1) withdrawals. VRM Class IV management would be prescribed for all lands, and would cause minimal adverse effects on development practices. Any permitted or leasing activities would have to comply with ROPs (Appendix D).	Locatable and salable mineral development is unlikely under this alternative due to low mineral development potential (less than 60 acres for locatable minerals). Several specific areas would be closed to mineral development. Future planning associated with the SMAs or VRM classifications under this alternative could result in additional restrictions for locatable and salable mineral development within those areas after a period of public review and comment. Any permitted or leasing activities would have to comply with ROPs (Appendix D).	Some additional lands would be made available for locatable and salable mineral exploration and development through the revocation of 17(d)(1) withdrawals. Several specific areas would be closed to mineral development. Future planning associated with the SMAs or VRM classifications under this alternative could result in additional restrictions for mineral development within those areas after a period of public review and comment. Any permitted or leasing activities would have to comply with ROPs (Appendix D).
Cumulative Effects: The effects of locatable and salable surface disturbance on BLM-managed lands, which are projected to be balanced all, or in part, by reclamation, would be compounded by external mineral exploration and development, transportation and power projects in the southcentral and southeast regions. Most mineral development would take place on lands other than those managed by BLM, given the low development potential outlined in Appendix G. The ROPs (Appendix D) under Alternatives B, C, and D and implementation planning for SMAs and more restrictive VRM classifications under Alternatives C and D, could contribute to cumulative effects in specific locations. However, mineral potential may be low in areas with these restrictions.			

Table 2.6-1 (continued). Summary and Comparison of Effects on Resources by Alternative

Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
EFFECTS ON OFF-HIGHWAY VEHICLES			
There are no OHV designations in place within the planning area. Management guidelines or permit stipulations may contain limits to OHV use on a case-by-case basis. Low levels of timber harvest (approximately 20 acres per year) could cause localized effects to OHV use either by limiting access, or by providing new access routes. Given the small portion of the planning area affected, effects on OHV use would be minimal.	Lands would be designated as “open” to OHV use. Effects on OHV activity could occur over more of the planning area compared to Alternative A, primarily due to the increase in lands available for mineral exploration and development (2,618 acres or less) that could adversely affect access to certain areas. Adverse effects from timber harvest (approximately 20 acres per year) would be the same as under Alternative A.	Lands would be designated as “limited” for OHV use to existing roads and trails consistent with ADNR’s <i>General Allowed Uses on State Lands</i> (Appendix E). Adverse effects from timber harvest (approximately 20 acres per year) would be the same as under Alternative A. Future planning associated with the SMAs, or VRM classifications under this alternative could result in additional regulations on OHV use within those areas after a period of public review and comment.	Lands would be designated as “limited” for OHV use to existing roads and trails consistent with ADNR’s <i>General Allowed Uses on State Lands</i> (Appendix E), as under Alternative C. Adverse effects from timber harvest (approximately 20 acres per year) would be the same as Alternative A. Future planning associated with the SMAs or VRM classifications under this alternative could result in additional regulations on OHV use within those areas after a period of public review and comment. The amount of land available for OHV use would be less than under Alternative A or B, and similar to Alternative C, although under this alternative the Knik River SRMA could result in areas specifically being designated as “open.”
Cumulative Effects: Outside of the Campbell Tract facility, there are no OHV use restrictions or designations on BLM-managed lands within the planning area. Use levels have been rising due to an increasing population, a growing interest in outdoor recreation opportunities, rising disposable income for use on recreational pursuits, and advances in OHV technology. State legislation is currently proposed to maintain State lands within the Knik River Valley as open to OHV use. Other future actions such as the Knik Arm Crossing, Juneau Access project, timber sales, and mining projects may create additional access to lands through the development of new access points and routes. Management actions proposed under Alternatives A and B would maintain OHV use as unrestricted, creating a slightly greater beneficial cumulative effect on OHV use within the planning area. Under Alternatives C and D, OHV use would be “limited,” thereby creating an adverse effect on OHV use. The implementation planning for SMAs and more restrictive VRM classifications under Alternatives C and D, could contribute to more adverse cumulative effects on OHV use in specific locations through increased restrictions.			

Table 2.6-1 (continued). Summary and Comparison of Effects on Resources by Alternative

Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
EFFECTS ON RECREATION			
The Campbell Tract is the only SMA currently identified within the planning area. Commercial recreation activity is currently limited by permit. The adoption of management actions under Alternative A would have minimal effects on recreation.	Under Alternative B, more land would be available for mineral development activity, which could potentially adversely affect recreation opportunities. However, given the low mineral development potential (2,618 acres or less), effects would be minor. Recreational use could be restricted through permitting in areas where there are conflicts with wildlife management objectives. Other conflicts between motorized and non-motorized recreation use could occur within the Knik River Valley.	SRMAs are identified in the Knik River and the Haines Block, and an ACEC is identified in the Neacola Mountains. Additional mineral leasing restrictions that may limit or protect recreation use would be put in place for certain sensitive or unique areas, but development potential is low (2,618 acres or less) and effects would be minimal. Recreation resources and uses would receive further levels of protection and regulation through implementation planning in these areas. All lands within the planning area would be designated as “limited” to existing roads and trails for OHV use. These actions could adversely affect recreation use, access, and the maintenance of recreation settings relative to current conditions.	SRMAs are identified in the Knik River and the Haines Block, and an ACEC is identified in the Neacola Mountains, as under Alternative C. Recreation resources and uses would receive further levels of protection and regulation through implementation planning in these areas. All lands within the planning area would be designated as “limited” to existing roads and trails for OHV use, which could adversely affect recreation use, access, and the maintenance of recreation settings relative to current conditions. Additional mineral leasing restrictions that may limit or protect recreation use would be put in place for certain sensitive or unique areas, but development potential is low (2,618 acres or less) and effects would be minimal. The majority of the actions under Alternative D would have beneficial effects on recreation use, access, and the preservation of recreation settings relative to current management actions.
Cumulative Effects: The Campbell Tract is the only SMA currently designated within the planning area. Unconsolidated land ownership patterns, and changing land ownership have complicated recreation management within the Ring of Fire planning area. The increased use of helicopters for commercial recreation purposes and the demand for increased access has necessitated examination of recreation management in areas of the Southeast region. Future actions such as recreation projects, mineral development, timber harvests, and transportation projects all have the potential to change recreation settings, access, and availability of recreation resources, especially in the Southcentral and Southeast regions. The implementation planning for proposed SMAs under Alternatives C and D could cause adverse cumulative effects in specific locations through increased restrictions on access. However, limitations on OHV use under Alternatives C and D, and the recommendations for WSR designation, could contribute to more beneficial cumulative effects in specific locations through maintenance of recreation settings and resources. The potential contribution to cumulative effects on recreation resources from RFFAs is greater than the contribution of BLM management actions on a regional scale.			

Table 2.6-1 (continued). Summary and Comparison of Effects on Resources by Alternative

Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
EFFECTS ON SPECIAL MANAGEMENT AREAS			
The Campell Tract is currently the only SMA in the planning area. No new SMAs are identified, therefore there are no direct or indirect effects under Alternative A.	No new SMAs are identified. There are no direct or indirect effects under Alternative B.	The Knik River and Haines Block are identified as SRMAs, and the Neacola Mountains is identified as an ACEC (Appendix F). Overall, these actions would beneficially affect special management areas within the planning area. Segments of 14 rivers were identified as eligible for WSR designation, but were determined not to be suitable.	The Knik River and Haines Block are identified as SRMAs, and the Neacola Mountains is identified as an ACEC (Appendix F).
Cumulative Effects: There have not been past effects to the SMAs that are pertinent to the analysis of cumulative effects. RFFAs could contribute to adverse effects to the values associated with the SMAs, unless properly mitigated. The SMAs will be protected via permits, implementation plans, ROPs and Stipulations (Appendix D), and there are no adverse cumulative effects anticipated.			
EFFECTS ON WILD AND SCENIC RIVERS			
No river segments would be recommended for designation as a WSR under this alternative.	No river segments would be recommended for designation as a WSR under this alternative.	Segments of 14 rivers were identified as eligible for WSR designation, but were determined not to be suitable. Identified ORVs for these river segments would be taken into consideration when reviewing proposed actions that might have an effect on the ORV.	No river segments would be recommended for designation as a WSR under this alternative.
Cumulative Effects: There are currently no designated WSRs within the Ring of Fire planning area. Commercial recreation permits, primarily in the Southeast region, have been increasing and such activities could alter values associated with certain river segments that were determined to be eligible for WSR designation under Alternative C. The free-flowing character of the rivers and their outstandingly remarkable values would be taken into consideration when reviewing proposed actions that might have an effect on ORVs. No adverse cumulative effects on ORVs within WSR corridors designated as eligible under Alternative C are anticipated.			

Table 2.6-1 (continued). Summary and Comparison of Effects on Resources by Alternative

Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
EFFECTS ON SOCIOECONOMICS			
Low levels of timber harvest (approximately 20 acres per year) or existing mineral development activity could cause beneficial economic effects on a localized scale. Beneficial economic effects could also arise from continued undesignated OHV use, primarily around areas of high use such as the Knik River Valley. Given the small portion of the planning area affected, beneficial effects on socioeconomics would be minor.	Low levels of timber harvest (approximately 20 acres per year) or mineral development activity (2,618 acres or less) could cause beneficial economic effects on a localized scale. As under Alternative A, beneficial economic effects could also arise from continued undesignated OHV use, primarily around areas of high use such as the Knik River Valley. No environmental justice issues would be created as a result of management actions under this alternative.	Alternative C could have fewer beneficial socioeconomic effects than other alternatives due to the smaller acreages available for mineral development activity (2,618 acres or less). Low levels of timber harvest (approximately 20 acres per year) or mineral development activity, and SMA designations could cause beneficial economic effects on a localized scale. Minor adverse economic effects could occur from limiting OHV use, especially in high use areas such as the Knik River Valley. No environmental justice issues would be created as a result of management actions under this alternative.	Alternative D could have more beneficial socioeconomic effects than Alternatives A or B. Low levels of timber harvest (approximately 20 acres per year) or mineral development activity (2,618 acres or less), and SMA designations could cause beneficial economic effects on a localized scale as described under Alternative C. Minor adverse economic effects could be seen as a result of limiting OHV use, especially in high use areas such as the Knik River. No environmental justice issues would be created as a result of management actions under this alternative.
Cumulative Effects: Increases in access, population growth, natural events, military activities, and mineral development activity have affected socioeconomics within the planning area in the past. Government revenue has generally increased, while revenue from oil and gas development declined, and sales and property taxes have increased. Given the relatively low level of timber harvest, mineral development activity, and recreation use on BLM-managed lands within the planning area, the potential contribution to cumulative effects on socioeconomic characteristics from RFFAs such as timber sales, transportation, mining, and other recreation activities, outweigh the contribution of BLM-managed activities on a regional scale. Any economic effects resulting from BLM actions would be difficult to detect.			

Table 2.6-1 (continued). Summary and Comparison of Effects on Resources by Alternative

Alternative A – No Action	Alternative B – Resource Development	Alternative C – Resource Conservation	Alternative D – Proposed Action
EFFECTS ON SUBSISTENCE			
Low levels of timber harvest (approximately 20 acres per year) may cause minor, site-specific adverse effects to subsistence unless appropriately mitigated. Adverse effects from fisheries, fire, or wildlife management actions would be minimal, and would not extend to the regional level. Any mining, oil and gas, or associated road development, if it were to occur, would likely be to small acreages. Unrestricted OHV use could also adversely affect subsistence users through the displacement of subsistence resources.	A larger acreage of subsistence resources could be disturbed as compared to Alternative A due to the increase in lands available for mineral exploration and development (2,618 acres or less). However, the potential for mineral development is low. Low levels of timber harvest (approximately 20 acres per year) may cause minor, site-specific adverse or beneficial effects to subsistence. Effects from fisheries, fire, or wildlife management actions would be minimal, and would not extend to the regional level. OHV use would remain “open,” which could adversely affect subsistence users through the displacement of subsistence resources.	A smaller acreage of subsistence resources could be disturbed as compared to Alternative B mineral development due to restrictions placed on certain sensitive or unique areas. Identification of SMAs would restrict land use activities in certain areas, which could beneficially affect subsistence users and resources. OHV use would be “limited” to existing roads and trails, which could reduce the amount of area where subsistence resources could have previously been displaced. Timber harvest (around 20 acres per year) could cause localized adverse effects to subsistence resources unless appropriately mitigated.	Subsistence resources have a greater potential for adverse effects under this alternative compared to Alternative A or C, but less potential than under Alternative B due to restrictions on mineral development and OHV use. Identification of SMAs could restrict land use activities in certain areas, thereby reducing adverse effects, or having beneficial effects, on subsistence resources relative to current conditions. OHV use would be “limited” to existing roads and trails, which would offer seasonal protections to subsistence resources in specific areas. Timber harvest (around 20 acres per year) would cause localized adverse effects on subsistence resources unless appropriately mitigated.
Cumulative Effects: Cumulative effects on subsistence resources and practices are premised upon the loss of access, reduced availability, and increased competition for those resources over time. The southeast and southcentral regions have seen the greatest level of effects to subsistence resources and users as part of ongoing development and population growth. Future mineral exploration and development, hydroelectric and coal fired power system sites, and ongoing residential and recreational land development along roads and waterways will increase the likelihood of ongoing access conflicts. Given the relatively low level of timber harvest activity (approximately 20 acres per year), mineral development potential (less than 2,618 acres), OHV activity (localized concentrations of adverse effects), and recreation use (unconsolidated parcels), the contribution to cumulative effects on subsistence resources from RFFAs are greater than the contribution of BLM management actions on a regional scale. Implementation planning under Alternatives C and D would help reduce adverse cumulative effects in specific locations. Adverse effects could be highlighted, and subsequently mitigated against, through close coordination with subsistence users during the implementation-planning phase of SMAs.			

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